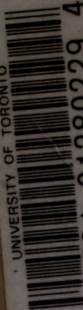


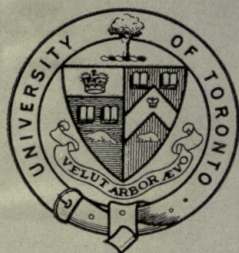
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Sir Christopher Wren
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SIR CHRISTOPHER WREN;

WITH SOME GENERAL REMARKS ON THE ORIGIN AND PROGRESS OF ARCHITECTURE.

“ARCHITECTURE HAS ITS POLITICAL USE, PUBLIC BUILDINGS BEING THE ORNAMENT OF A COUNTRY; IT ESTABLISHES A NATION; DRAWS PEOPLE AND COMMERCE; MAKES THE PEOPLE LOVE THEIR NATIVE COUNTRY, WHICH PASSION IS THE ORIGIN OF ALL GREAT ACTIONS IN A COMMONWEALTH.
“IT AIMS AT ETERNITY; AND THEREFORE IS THE ONLY THING INCAPABLE OF MODES AND FASHIONS IN ITS PRINCIPLES (THE ORDERS,) WHICH ARE FOUNDED UPON THE EXPERIENCE OF ALL AGES, PROMOTED BY THE VAST TREASURES OF ALL THE GREAT MONARCHS, AND SKILL OF THE GREATEST ARTISTS AND GEOMETRICIANS, EVERY ONE EMULATING EACH OTHER; AND EXPERIMENTS IN THIS KIND, BEING GREATLY EXPENSIVE AND ERRORS INCORRECTIBLE, IS THE REASON THAT THE PRINCIPLES OF ARCHITECTURE ARE NOW RATHER THE STUDY OF ANTIQUITY THAN FANCY.”—*Wren.*

CHAPTER I.

Of the Origin of Architecture and the different Styles, and the purposes to which they have been applied.

WE shall preface the account of the life of Sir Christopher Wren, whose name is associated with all that is great in English architecture, with a few general observations on the rise and progress of the art, which will in some measure serve as an introduction to the Treatise on that subject intended to be published.

It is generally admitted that the early architecture of Greece was indebted to Egypt for some of its rudiments; and yet it is impossible to institute the most careless comparison, without observing the very different character displayed in the earliest specimens of Grecian art, and particularly in sculpture. The causes of this diversity it is difficult now to define, although every variety of speculation has been exhausted on the subject.

In all the advances of the art, the principles of the early attempts, which had their origin in necessity, appear to have been constantly adopted in the improvements of the succeeding ages: the dark and ponderous buildings of the Egyptians have a near affinity to the caverns of their ancestors; and the ornamental and elegant architecture of Greece bears striking testimony to the early use of the timber with which that country abounded. In India the original employment of reed and bamboo is discovered in the lofty and slender buildings of later times; in China the roofs are always constructed in imitation of

the moveable tents of the aboriginal Tartars; and the same observation applies to Turkish and Saracenic buildings.

One of the peculiar features of Egyptian buildings is, that none of the specimens afford much evidence of variation, either in principle or in the constituent parts, during a very considerable period of time. Without entertaining great admiration for the beauty, the grandeur, or the simplicity of Egyptian structures, it is yet impossible to contemplate without wonder those immense and gloomy monuments of labour, in which, independently of situation and size, a very striking effect is produced by the peculiarity in the arrangement of the different parts, and by their vast groves of columns, obelisks, and colossal statues.

The external character of the Egyptian style is, however, in a great degree simple and imposing; the columns and decorations usually are internal, contrary to the Grecian architecture, in which the interior of the temples is comparatively plain, the columns, the statuary, and other ornaments being nearly all external. This may be traced, in some degree, to the difference of the climate.

In the contemplation of the Egyptian temples, their resemblance to the ancient buildings of India is peculiarly striking; and this naturally leads to the consideration of the discussions to which the early progress of ancient nations in architecture and some other arts has given rise.

In tracing the origin of the arts first practised by man in his progress from barbarism to civilisation, after those

necessary to insure his subsistence and clothing, that of providing shelter from the inclemency of the weather must have been the earliest cultivated. It has been frequently remarked, how soon man became acquainted with the means of fabricating cloth; architecture and weaving are amongst the first complicated arts practised by barbarians, and were even at an early period carried to considerable perfection: next to the care of necessaries, the love of ornaments arises in the breast of a savage; and the art of fetching out the brilliancy of the precious stones and metals is, accordingly, one of the earliest which are noted in the progress of a rude people.

Architecture, weaving, and jewellery are the only arts for which the *Hindoos* have been celebrated, and even these, with the exception of weaving, attained but a low degree of perfection. The ancient buildings of Hindostan have been at different periods the subject of wonder, and considered as evidencing a high civilisation: yet there are productions in China of dimensions and importance vying with them. "The Mexicans, ignorant of iron, cranes, and scaffolds, with neither carts nor sledges, and no means of working their stones but with flints, or of polishing them but by rubbing them against each other, accomplished works which in magnitude and symmetry rival any of which Hindostan can boast."

The Pyramids of Egypt, vast as are their dimensions, afford intrinsic evidence of the rudeness of the period at which they were reared. The sepulchre of *Belus* at Babylon, according to *Strabo*, was built of different bodies or stages one rising above another, exactly in the manner of the great Temple at Mexico, as first noticed by Humboldt, who also observed the resemblance between the Pyramids of Egypt and the vast Pyramids the remains of which are to be found in South America. The Palace of Montezuma strongly resembled that of the Emperor of China; and Knox, after remarking the passion of the Cingalese for constructing temples and monuments of enormous magnitude in honour of their Gods, observes, "as if they had been born solely to hew rocks and great stones, and lay them in heaps:" "the unsophisticated opinion," remarks Mr. Mill, "of a sound understanding on operations which the affection of taste and antiquarian credu-

lity have magnified into proofs of the highest civilisation."*

It is not intended to urge any arguments in detail as to the common origin of the buildings of India and the *Monolithic* (built of one rock) Temple of Egypt. The fact, however, that the Sepoys, in their march to join the army of Lord Hutchinson, conceived they had found their own temples in the ruins of *Dendyra*, is mentioned by Captain Light in his *Travels*, and so convinced were they of the identity, as actually to perform their devotions in them.

Monsieur Legrand, in his very interesting Essay on Architecture, attaches much higher value to Egyptian architecture than it deserves, describing it as "noble, severe, and imposing in the highest degree, and appearing still to resist the destroying hand of time after a lapse of four thousand years;" and he thinks that such ideas were not generated in the infancy of the art, as has been often imagined, but were "the fruits of a long continued civilisation, great knowledge, and a tending to lasting glory." "This elevated style," continues the author, rising with his subject, "which is not sufficiently understood, deserves to be profoundly studied in all its parts, and again adopted by those men whose aim is to astonish the present age, and to ensure the admiration of posterity." That Pyramids will be again built for the admiration of the present or of future ages is not to be feared; and it may be doubted, if Monsieur Legrand will by his eloquence conjure up a hardy spirit, who will undertake the task of handing down to posterity, at a vast expense, the dark and dreary monotony of the Egyptian Temples, at least not till we shall be again reduced to a state of society resembling that in which they lived who commanded them to rise, and till some king shall exist, "whose power being unlimited, is compelled to solace, by the erection of a Pyramid, the satiety of dominion, and tastelessness of pleasures, and the tediousness of declining life, by seeing

* *British India*, vol. i. p. 430.—The chapter of Mr. Mill, on the Arts of Hindostan, is particularly interesting, and contains a vast variety of curious matter, tending to show that the facts usually adduced as proofs of the early and complete state of civilisation amongst the Carnatic nations, do not establish the position contended for, and that Hindostan had not in fact made any greater progress in the arts than China, Mexico, or other nations still considered in a state of semi-barbarism.

thousands labour without good, and one stone for no purpose laid on another."

In considering the history and progress of art, its real importance to the happiness of mankind is a question which naturally occurs. If it be true that what are termed the fine arts are of the importance sometimes ascribed to them, their effects on the welfare of mankind may be expected to increase in proportion as they advanced towards perfection; and it is the opinion of some eminent writers, that they have not yet reached the utmost verge of excellence, and that we have still much to hope and to attain. To determine, however, this point, we must have some standard admitted to be just, some uncontroverted principles or axioms with which we can institute comparison, or by which we can measure our progress: taste is too indefinite for the purpose; it is claimed equally by persons who hold the most discordant opinions on the point, and whose repugnant pretensions rest upon the most opposite principles. Being incapable of transmission by very accurate rules of description, in practice taste frequently appears a term convertible with that of fancy.

Whatever doubts may exist as to the importance of the fine arts, the case is different with the sciences. In them, scarcely a discovery or an improvement is suggested but it becomes converted to the use of mankind: they leave no room for conjecture as to their merits, nor any hesitation as to their advance. The navigator, manufacturer, statesman, and philosopher concur in their opinions of their progress and effect; and our ameliorated condition affords the best testimony of their improvement. Whatever may be the comparative importance of the results flowing from these different branches of our knowledge, it is plain that they require at least the same general circumstances to favour their growth—exemption from the desolation of war, opulence to furnish rewards, and leisure to permit application: but, above all, a government should exist, in which the preponderating influence of the people forbids that a nation should be subject to the narrow views and interests which, with few exceptions, appear at all periods to have regulated the dominion of despotism. The suspicion natural to tyranny, and the dread that light or information should expose its deformity, makes it

feelingly alive to the dangers resulting from all freedom of inquiry.

It is impossible, nevertheless, to consider the unrivalled excellence which the arts attained during the prosperity of some of the Italian republics, without being convinced of the prodigious effects sometimes produced on the energies of the human mind, by an exemption not merely from the restraint of absolute authority, but even from the languor and tameness often produced by very regular governments, though in effect calculated for the tranquillity and comfort of a people. The internal condition of these states was a perpetual struggle of faction amongst the citizens, a contest for power and popularity amongst the rich, a defective administration of the laws, and a doubtful state of private morals. The same observations may, in a great measure, be applied to some of the ancient Greek republics;—and yet amidst such scenes were reared the most finished monuments of art, precious indeed, but purchased at far too high a price, if the alternations of anarchy and misrule were necessary for their production.

Architecture, as an ornamental science, may be supposed to have kept pace with the art of design, the improvements in each depending nearly on the same vigour of imagination and general refinement of taste; and the same powerful cause, or combination of causes, which (in Greece) so early produced by the operations of genius such a magical effect on the arts of design, exerted a similar influence on the state of architecture.*

Grecian Architecture.

From the contemplation of the solemn grandeur of the Egyptian monuments we proceed to the Greek temples, whose character is so different. Whilst struck with the size of the Egyptian buildings, we feel that they are the effect of incessant labour, the works of slaves, without much of the assistance of intellectual greatness, and that their importance arises chiefly from their extent. It is far otherwise with the works of Greece, where every line is expressive of the genius and imagination of the author; and, though great labour must have been exerted in their construction, yet the mind is relieved from all sense of pain by admiration of the result.

* *Introduct. to Trans. of Vitruvius.*

fluence of variety. The works of architecture are designed to last, and do last for centuries: the life of man is of far less duration than such productions; and the present period of the world, though old with respect to those arts which are employed upon perishable subjects, may be considered as yet young in relation to an art which is employed upon such durable materials as those of architecture. Centuries must elapse before works of this class demand to be renewed. The sacredness of antiquity is acquired in the mean time, and a new motive given for the preservation of similar forms.— We have considered Mr. Alison's positions so true, and so important to the due consideration of the subject of the orders, that it has been necessary to give them at length.

In observing on the nature and effect of Grecian architecture, it is necessary to advert to a singular position of the learned writer of the Introduction to the translation, of Vitruvius, (Lord Aberdeen,) namely, that the ancients never possessed any knowledge or perception of those qualities of external objects which are called picturesque. The admirable positions of the Temple of Minerva, the approach (on the angle) to the Temple of Jupiter Olympius at Athens and Sunium, and many other examples, may, we think, be quoted as ample testimony that the ancients possessed a fine and just sentiment for the picturesque position and effect of these monuments, although they practised landscape painting very little, and the illusion of perspective was not much used by them in their compositions. The villa of Pliny, so elegant and so interesting in the description, and which has been considered as a proof of the opinion we have advanced, is viewed by the writer above noticed as not in truth affording any grounds for such an opinion: and he suggests, that if any external irregularity may be considered to have existed, it must have been purely accidental, and only produced in consequence of the necessary arrangement of the interior apartments, and without the least reference to any general or preconceived design.

With regard, however, to the private houses of the ancients in cities, there are but very few instances of much attention being paid to the exterior architectural design; and they were of slight

construction. Those of Pompeii, as well as those designed in the various paintings found on the walls of that city, seem to prove that exterior architecture was not an object, and was generally sacrificed to that of the interior. The habits of domestic privacy of a people which required that the apartments should receive light and air only from an interior court or atrium, and the climate which made such a court desirable on account of its coolness, induced them to lavish the graces and expense of their architecture on the interior rather than the exterior of their houses. Julius Cæsar obtained a special decree to enable him to adorn the front of his house with a pediment: and Gibbon observes, that in the commonwealths of Athens and Rome the modes and simplicity of private houses announced the equal condition of freemen, whilst the sovereignty of the people was represented in the majestic edifices designed to the public use; every part of the empire was fitted with ample theatres, temples, porticoes, triumphal arches, baths, and aqueducts, all variously conducive to the health, the devotion, and the pleasures of the meanest subject.

Gothic Architecture.

In the foregoing observations on the different styles, the Gothic has been omitted. Whatever may be its beauties, and whatever may be the feelings of admiration arising from association, there can be no question that the style is but little adapted to utility; and the expense of producing what might be considered as perfect specimens of this branch of the art, would alone in these days, in a great degree, preclude its revival. The style termed Gothic, (concerning the origin of which we shall not add to the number of discussions,) probably took its rise in the East; this hypothesis has been the most successfully supported by the fact of its appearing nearly at once throughout Christendom, and at a time when all the different states of Europe were attracted to the East by the Crusades; and it seems that the Goths had no share in the invention of the style which now bears their name, it being, in fact, a term of vituperation used by those who had introduced the restored Grecian. In Italy the term had its origin with

the school of Palladio, and in England with Inigo Jones and Wren.*

Roman Architecture.

The zenith of Roman architecture was under the auspices of Vespasian and his immediate successors, who completed the Temple of Peace and the Coliseum: upon the establishment of Christianity, external magnificence was sacrificed to internal decoration; and the oblong square, the ground plan peculiar to ancient temples, simple in the interior but magnificent in the external view, was gradually changed, as will be hereafter noticed, into the Greek and Latin cross, which are less favourable to beauty.

It was not, however, till about the time of Leo X. that architects were encouraged to apply to the antique models, and to measure their proportions, that the orders might be designed with precision. With Bramante, Sangallo, and Michael Angelo, the elegance of the Grecian and the splendour of the Roman architecture was revived, and St. Peter's was commenced. This may be considered as the period of the revival of architecture in Europe. After that, Rome became the grand school for architects; and they in general were content to form their taste, not as the great authors of the revival had, from works of antiquity, but from the new works which were then rising. It was not, however, till the time of Palladio that all the elegance and simplicity of the ancient buildings were rendered applicable to the practical purposes of domestic use.

The different Epochs.

On reviewing the progress of architecture, we find it marked by distinct epochs, which will, perhaps, admit of the following distribution. The *Assyrian*, of which, however, we have no definite knowledge, except its mention in scripture.—The *Egyptian* almost coeval with the Syrian, in which, however, a distinct style was adopted, marked by the building of Thebes, Dendyra, and the other principal monuments of Egypt.—The *Grecian*, (about the 7th to the 3rd century before

Christ,) when the principal temples, including the Parthenon, the temples of Pæstum, Ægina, Corinth, &c. were constructed.—The *Roman*, in which the great aqueducts, bridges, and other public works were built, and in which the arch was brought into more efficient use, and gave rise to novel and infinite combinations and improvements in the art of building: the time of Hadrian may be fixed as the best period of this style.—The *first Christian era*, (Justinian,) in which the multiplied dome or cupola first came into general use; and this is important, as it was adopted for two reasons—to accommodate the large Christian congregations, and to distinguish their churches from the heathen temples, which the Iconoclasts held in detestation.—The *Saracenic*, which, without the colossal materials and mechanical means used by the Romans, first gave the idea of raising immense structures by smaller means.—And lastly, the *Cathedral or second Christian era* (thirteenth century) is remarkable for the vast sacred edifices which were erected throughout Europe, all partaking of the same general character.

It was during these several eras that the different great improvements were effected. As, in the *Assyrian*, the invention and completion of the brick.—In the *Egyptian*, the working of granite and marbles, and the use of them on an extended scale.—In the *Grecian*, the perfection of the beauty of proportion or fitness supplying the place of vastness and ponderous mass.—In the *Roman*, the arch, forming in fact the basis of the science, and admitting of the extension and adaptation of the principles of architecture to works which the Greeks could not have executed.—In the *first Christian era*, the dome perfected.—And in the *second or Gothic*, the pointed arch introduced, by which additional lightness and strength were attained.—These eras were dependent on the great religious changes in the history of Europe; were respectively marked by a different manner of construction; and (though separated by considerable intervals) formed the types for the productions during the intermediate periods.

Of Architecture in England.

The first appearance of the Italian school in England began with Holbein, (Hen. 8.) who was established here under

* This observation does not of course apply to the Saxon or Norman style with the circular instead of the pointed style, which was probably borrowed from the Roman and Byzantine schools, and hence not improperly termed *Romanesque*.

royal patronage, and gained sufficient influence for a partial introduction of the architecture which had begun to revive in Italy. The first house purely Italian is stated, by Mr. Dallaway, to have been built by Sir Horatio Palavicini; and although many magnificent houses were built in the reign of Elizabeth, they had lost all the beauty of the Gothic, without deriving any improvement from the dawning taste for the revived style. The ornaments, both within and without, were cumbrous, and equally void of grace and propriety:—nothing could exceed the heaviness of the cornices and ceilings wrought into compartments, or the awkward intersection of the passages; the hall retained nothing of the Gothic character, excepting its size and large bay window, and instead of battlements and pinnacles, the parapet was broken into numerous high misshapen pediments. Towards the end of the reign of James I. and the beginning of Charles's taste in architecture made a bold step from Italy to England at once, scarcely resting a moment to visit France by the way.

From the most profound ignorance in architecture, Inigo Jones (who had been sent to Italy either by Lord Pembroke or Lord Arundel) started up a prodigy of art, vying in some degree with his master, Palladio. The Banqueting-house at Whitehall, and the Church of St. Paul, Covent Garden, are sufficient proofs of his claim to be considered the founder of this style in England. But the civil wars put a stop to the course so happily begun. Wren, the next genius, arose to kindle afresh the love for that art which had been so long neglected. What had been begun by Jones was fully accomplished by Wren; and the period of our greatest architectural eminence was not far distant.

CHAPTER II.

Wren's Birth, Education, and early Studies.

CHRISTOPHER WREN was born at East Knoyle, in Wiltshire, the rectory of his father, Dr. Christopher Wren, Dean of Windsor, on the 20th day of October, 1632. His father was a learned divine, descended from an ancient English family of Danish origin, and his mother was the daughter and heiress of Robert Cox, of Fonthill, in the county of Wilts.

Dr. Matthew Wren, his uncle, successively Bishop of Hereford, Norwich,

and Ely, was a person eminent in the ecclesiastical history of England; who, having devoted himself to the royal cause, was impeached by order of the House of Commons in 1641, shortly after the impeachment of Archbishop Laud; but he was never brought to trial, though he suffered a protracted imprisonment of nearly twenty years: an injustice not singular in those troublous times. The *Parentalia*, a work we shall afterwards notice, contains a somewhat laboured defence of the bishop, meant to have been used had he been put on his trial. Right or wrong, he adhered firmly and unchangingly to the cause he had espoused, and to the memory of his royal master; and Cromwell, who often met Christopher (the subject of this memoir,) at his son-in-law Claypole's sent a message to the uncle, (by the nephew,) that he might come out of the Tower if he pleased; but the bishop utterly refused, disdaining the terms proposed for his enlargement; which were, as he conceived, a mean acknowledgment of Cromwell's favour and submission to his tyranny; determining, as he expresses it, to tarry the Lord's leisure, and owe his deliverance to him only. Whether Cromwell was informed of the terms with which his offers were rejected, is not known; but if he was, it does not appear to have altered for the worse the situation of the martyr to the cause of Royalty. The bishop, however, was mainly tinctured with the feelings of the times: he was conspicuous for his cruel persecution of the dissenters within his diocese; and he is represented as proceeding passionately against the Walloon manufacturers, who in the time of Edward VI. transplanted themselves into England and had their privileges enlarged, and were much encouraged by Elizabeth. He also makes a conspicuous figure in the virulent party squib, called "A nest of perfidious vipers in the parliament of black saints." From this it may be inferred, that his zeal for his own party carried him beyond reason, and exposed him to the severe animadversions of his enemies.—He had four sons, all of whom were eminent in their day; one being, at the Restoration, Secretary to Lord Clarendon, and afterwards to James, Duke of York; one was knighted, and the other two returned to Parliament.

Dr. Wren, the father of Sir Chris-

topher, was educated at Merchant Tailors' School; he became a fellow of St. John's, Oxford, Chaplain in Ordinary to Charles I., and was ultimately installed Dean of Windsor, and made Registrar of the Order of the Garter. His tastes and his habits led him to associate with all the learned of the age; and he possessed himself considerable attainments both in science and literature: he had turned his attention to the cultivation of that art, in the pursuit of which his son was afterwards to become so eminent; and it appears, from an estimate made by him, and preserved in the State Papers, that he had been employed by the court respecting a building to be erected for the Queen of Charles I.

Wren was one of those whose future eminence was early foreseen; and whose riper years redeemed the promise of youth. Like his great contemporary Pascal, his genius early displayed itself. But though alike in talents, their fates were dissimilar. The genius and acquirements of Wren laid the groundwork of his happiness through a long series of years, whilst in Pascal the acuteness of his intellect, and his acquirements, seem but to have aggravated his misery, and to have hurried him to an early grave. At the age of thirteen an invention by Wren of some new astronomical instrument is recorded, the account of which is dedicated by him to his father, in a Latin epistle. This essay was followed by others of the same kind. His infancy and youth were marked by a peculiarly delicate state of health; he received his early education at home under his father, and at the age of fourteen was sent to Wadham college, Oxford, where notwithstanding his youth, his attainments procured him the friendship and patronage of the most eminent persons, amongst whom were the ingenious Bishop Wilkins, and the celebrated Oughtred, who in the preface to his *Clavis Mathematica* mentions Wren as having attained, at the age of sixteen, such a knowledge in mathematics and other branches of natural philosophy, as gave promise of future eminence.—Wilkins also introduced him to Prince Charles, Elector Palatine, as a prodigy.

As early as the year 1645, Dr. Willis, an eminent mathematician, formed a sort of club of scientific persons, chiefly those connected with Gresham college, who met weekly; amongst them was Wren. Their object was the discussion

of all subjects relating to philosophical inquiries, and from these meetings originated that body of eminent persons called the Royal Society, who by their pursuits contributed so mainly to the advancement of science. In 1648, Dr. Wilkins and several other leading members retired to Oxford, where they continued their weekly meetings, and thus set a fashion for the study of the useful sciences in that university. Amongst those distinguished persons were Sir W. Petty, the ancestor of the Lansdowne family, and Robert Boyle.

One of Wren's early inventions in the arts was a sort of *penna duplex*, for which he obtained a patent, and which gave rise to some controversy between Sir William Petty and himself; the former having taken out a patent for a similar invention on his return from France in the same year. Wren, more fortunate than his father and uncle, though he lived in troubled times, when the conflicting parties were exhausting themselves in acts of violence, pursued his course straight to the object of his ambition, in the study of those sciences which he was afterwards to adorn.

He is said to have been the first who turned his attention to the representation of subjects as shown in a microscope, and in which he was mainly assisted by Hooke; and Harrington, the author of the *Oceana*, alludes to these tastes, and also to the politics of the family, in some observations on a cousin of Wren's, whom he designates as being one of those *virtuosi*, "who had an excellent faculty for magnifying a louse and diminishing a commonwealth." Shortly after this he produced a Theory of the Planet Saturn, an Algebraic Treatise on the Julian Period, a tract much esteemed, it is said, by the most learned mathematicians of his day. In 1653 he was elected Fellow of his college, and soon proceeded to London, continuing to cultivate the sciences. One of the most important inventions of this period was the barometer; and to this some laid claim on behalf of Wren; but the discovery was, without doubt, the property of Torricelli, though it is supposed Wren was the first in England who suggested that the various weight of the atmosphere was the true cause of the variations in the height of the mercury, which the followers of Des Cartes had ascribed to the influence of the moon. Evelyn (himself a man of sense

and an ardent lover of learning, who studied all that was useful to his country, and was associated with the most eminent of his time) could not but often come in contact with Wren; and accordingly, in his amusing journal, he frequently bears testimony to his early excellence, calling him "that prodigious young scholar," "that miracle of youth," "rare and early prodigy of science."

Whilst Wren was devoted to the pursuits of science, the times were distracted by the fury of party. The objects of the early association of eminent persons at Oxford is thus described by Spratt, Bishop of Rochester, in his *History of the Royal Society*: "Their first purpose was no more than only the satisfaction of breathing a fresher air, and of conversing in quiet one with another, without being engaged in the passions and madness of that dismal age. And from the institution of that assembly it had been enough, if no other advantage had come but this, that by this means there was a race of young men provided against the next age, whose minds, receiving from them their first impressions of sober and generous knowledge, were invincibly armed against all the enchantments of enthusiasm. But what is more, I may venture to affirm, that it was in good measure by the influence which these gentlemen had over the rest, that the university itself, or at least any part of its discipline and order, was saved from ruin."

"Nor were the good effects of this conversation only confined to Oxford, but they have made themselves known by their printed works, both in our own and in the learned languages, which have much conducted to the fame of our nation *abroad*, and to the spreading profitable light at *home*."

It was not until the age of Wren that the inductive process of Bacon was duly understood and appreciated. This period, on the eve of Newton's great discoveries, was perhaps the most important that has yet occurred in the annals of science. The spirit of inquiry, at first feeble, which actuated some individuals at the time of the revival of learning, had from numerous causes gathered strength, and spread itself over Europe. Bacon had turned his powerful and creative mind to the state of human knowledge, marking its imperfections and planning its improvements, amending the vagueness and

uncertainty of physical speculations, and supplying the want of connection between the sciences and the arts. This and the illustration of Bacon's method by Galileo and his contemporaries, (amongst whom Wren was eminent,) first led the way to the general adoption of the new philosophy—reasoning gradually from particulars to those that were only one step more general; not as formerly, adopting general positions drawn suddenly from particular instances hastily assumed. It was now felt that facts and not opinions were the things to reason about, in order to arrive at the knowledge of the laws governing the material world; and Bacon himself had foreseen the formation of a society directed to scientific improvement, and has given a general outline of it in the *Nova Atlantis*. And it was now that the enthusiastic ardour in the pursuit of natural philosophy was awakened in the minds of literary men, and which has ever since remained undiminished. None of the members of these meetings were more conspicuous than Wren, who, together with Boyle, (the great improver of the air-pump,) had imbibed the true spirit of Bacon. They applied themselves to the prosecution of experimental science, being the avowed enemies of the philosophy of Aristotle; following up the true principles of the new philosophy by preparing a history of the phenomena of nature in all their modifications and varieties; and instituting every form of experiment for the sake of discovery. Wren was one of the first (in conjunction with Wallis, Huygens, Newton, Leibnitz, and the Bernouillis) to occupy himself with the investigation of the cycloid, which had been discovered by Pascal; and he constantly urged, in his communications to the Royal Society, the importance of experiments and observations on facts. "For the improvement of theories," he observes, "we need be least solicitous; it is a work which will insensibly grow on us if we be always doing something in experiment; and every one is more prone to exercise his fancy in building paper theories than patient first to pile the unsure foundation, and hew solid materials out of the history of nature: this is rather our task, and in many things we must be content to plant crab stocks for posterity to graft on; and instead of the vanity of prognosti-

eating, I could wish we would have the patience for some years of registering past times, which is the certain way of learning to prognosticate; experiment and reason is the only way of prophesying natural events; in combating prejudices, detecting error, and establishing truth."

This great era in the progress of useful knowledge was destined to conclude with the most splendid series of philosophical improvements yet recorded—the discovery by Newton, in succession, of fluxions, the composition of light, and the principle of universal gravitation, all within twenty years, and all the work of one individual!

During his residence at Oxford, Wren in anatomical science stood amongst the first professors of his day, and as early as the age of fifteen he was employed by Sir Charles Scarborough, an eminent physician and mathematician, as a demonstrating assistant. His abilities as a demonstrator, and his attainments in anatomy generally, are acknowledged by Dr. Willis, in his *Treatise on the Brain*, for which he made all the drawings; and he is allowed to have been the originator of the physiological experiment of injecting various liquors into the veins of living animals, which Bishop Spratt calls a "noble experiment," exhibited at the meetings at Oxford. A notice of it was sent into Germany, and published abroad, as is supposed by the treachery of Oldenburgh, a person connected with the men of science of that day; and who is believed often to have secretly communicated to the continental philosophers the discoveries which came to his knowledge, thus giving rise to numberless disputes and claims to priority of invention among the learned of that time.

This experiment is alluded to by Sir Christopher Wren himself, in a letter to a friend in Ireland, (conceived by Mr. Elmes to be Sir William Petty:) "The most considerable experiment I have made of late is this: I injected wine and ale into the mass of blood in a living dog, by a vein, in good quantities, till he became extremely drunk; but soon after voided it by urine. It will be too long to tell you the effects of opium, scammony, and other things which I have tried in this way. I am in further pursuit of the experiment, which I take to be of great concernment, and what will give great light to the

theory and practice of physic." The French, however, laid claim to the discovery; but we shall not here enter into the controversy; the genius and the acknowledged and undisputed works of Wren enable him beyond all others to abandon his claim when it is contested.

CHAPTER III.

Wren's pursuits to the Building of St. Paul's.

WREN, in his twenty-fifth year, left his retirement at Oxford for the more extended field of the metropolis; being chosen, in 1657, to fill the Professor's chair of Astronomy at Gresham college. His inaugural Oration in Latin is published in Ward's *Lives of the Gresham Professors*, and its first sketch in English is to be found in the *Parentalia*; it is curious, as showing the care and labour which he thought it necessary to bestow on the work. This Oration at once established his reputation, and his Lectures were attended by the most eminent and learned persons of the time. The greater part of the Oxford Society, who afterwards were the leading members of the Royal Society, coming to London about 1658, usually assembled to hear Wren's Wednesday Lectures, in his Lecture room, and on Tuesday those upon Geometry, by Rooke.

In his inaugural discourse, amongst other things, he proposed several methods by which to account for the shadows returning backwards ten degrees on the dial of King Ahaz, by the laws of nature. One subject of discussion was the Telescope, to the improvement of which he had greatly contributed. Another head comprised certain properties of the air and the barometer.

In 1658 Wren acquired fresh fame as a mathematician, by the solution of the celebrated problem of Pascal; which had been given out, under the assumed name of Jean de Mountfort, as a challenge to the learned of England; and, in return, he proposed another, for the solution of the mathematicians of France, which had formerly been proposed by Kepler, and solved by himself geometrically. The challenge, however, was never answered. In the same year he communicated four mathematical tracts to Dr. Wallis, the Savilian Professor at Oxford, which were published by the doctor in his *Treatise on the Cycloid*.

His method for the rectification of the cycloid was also produced by him this year; and he made a series of observations on the phases of the Planet Saturn, the results of which he disclosed in his Gresham Lectures.

His pursuits were alien to the fury of party or the politics of the day, and to this, and his connection with Claypole, it is probable he owed his escape from that persecution to which the other members of his family were exposed. The members of the Club, on the death of Cromwell, were scattered by the distractions which ensued, and the College itself became a quarter for soldiers.

Wren, who had fled from London to Oxford during the confusion, received the following letters from the Bishop of Rochester and his cousin; and as they are curious we shall give them at length.

Dear Sir,

This day I went to visit Gresham College, but found the place in such a nasty condition, so defiled, and the smell so infernal, that if you should come now to make use of your tube, it would be like Dives looking out of hell into heaven. Dr. Goddard, of all your colleagues, keeps possession, which he could never be able to do, had he not before prepared his nose for camp perfumes, by his voyage into Scotland, and had he not such excellent restoratives in his cellars. The soldiers by the violence which they put on the Muses' seats, have made themselves odious to all the ingenious world; and if we pass by their having undone the nation, this crime we shall never be able to forgive them; and as for what concerns you, they have now proved, that their pretensions to religion were all feigned, since by hindering your Lectures they have committed so manifest a sin against Heaven. Yet your many friends here hope you will hereafter recompense this unhappy leisure which is afforded you, by making those admirable discourses which you had intended for this place more public; and that you will imitate Cicero, who, being hindered pronouncing his Oration *pro Milone*, by the guards of Pompey's soldiers that encompassed his chair, set it forth afterwards more perfect than the rest.

His cousin Matthew, eldest son of Matthew, Bishop of Ely, also wrote to him from London at the same time, and on the same account, the following letter, which admirably depicts his own feelings and the state of the capital.

Dear Cousin,

Yesterday being the first of the term, I resolved to make an experiment, whether Dr. Horton entertained the new auditory of Gresham with any Lecture; for I took it for granted, that if his divinity could be spared, your mathematics would not be expected. But at the gate I was stopped by a man with a gun, who told me there was no admission on that account, the college being reformed into a garrison. Then, changing my pretension, I scarce got permission to go into Dr. Goddard, who gave me assurance enough, that none of your colleagues intended to appear this term, unless the soldiers be removed, of which there is no probability. Upon these premises, it is the conclusion of all your friends, that you may save that journey hither, unless some other occasion calls you; and for these

I expect you will make me your agent, if they be such as I am capable of despatching. But it will not be amiss to take from hence the occasion of a short and civil letter to the Committee, signifying that you hope you have not deceived their expectations in choosing you, and that you are ready to attend to your duty but for this public interruption and exclusion from your chamber; or what else you will that looks towards this. I know no more domestic news, than what every body talks of. Yesterday I was in Westminster-Hall, and saw only Kendigate and Windham in the two courts, and Wild and Parker in the Exchequer; in the chancery none at all: for Bradshaw keeps the Seal as if it were to be carried before him in the other world, whither he is going. Glyn and Fountain pleaded at the bar. They talk much of the mediation of the two crowns, and proceed so far as to name Marshall Clerambault for the Ambassador, who is come hither from France.—My service to all my friends.

Soon after the return of Charles II., Wren was chosen to fill the Savilian professor's chair at Oxford, then one of the highest distinctions which could be conferred on a scientific person. The Restoration, which began with such favourable auspices, was mainly conducive to the foundation of the Royal Society, in which Cowley, the poet, bore a principal part; planning a society, which should have the disposal of considerable funds, for the encouragement of knowledge, and not forgetting the important work of the instruction of youth. The object of the society cannot be better expressed than in the words of Spratt, its earliest and eloquent historian.

“The purpose of its founders was to make faithful records of all the works of nature and art which can come within their reach; so that the present age and posterity may be able to put a mark on the errors which have been strengthened by long prescription; to restore the truths that have lain neglected; to push on those that are already known to more various uses; to make the way more passable to what remains unrevealed. This is the compass of their design. And to accomplish this, they have endeavoured to separate the knowledge of nature from the colours of rhetoric, the devices of fancy, or the delightful deceit of fables. They have laboured,” continues this learned prelate, “to enlarge it, from being confined to the custody of a few, or from servitude to private interests. They have striven to preserve it from being overpressed by a confused heap of vain and useless particulars; or from being straitened and bounded up too much by general doctrines. They have tried to put it into a condition of perpetually increasing, by settling an inviolable correspondence

between the hand and the brain. They have studied to make it not only an enterprise of one season, or of some lucky opportunity; but a business of time, a steady, a lasting, a popular, an uninterrupted work. They have attempted to free it from the artifice and humour and passions of sects; to render it an instrument whereby mankind may obtain a dominion of things, and not only over one another's judgments. And, lastly, they have begun to establish these reformations in philosophy, not so much by any solemnity of laws, or ostentation of ceremonies, as by *solid practice and examples*; not a glorious pomp of words, but by the silent, effectual, and unanswerable arguments of real productions. As for what belongs to the members themselves that are to constitute the society, it is to be noted, that they have freely admitted men of different religions, countries, and professions of life. This they were obliged to do, or else they would come far short of the largeness of their own declarations. For they openly profess, not to lay the foundation of an English, Scotch, Irish, Popish, or Protestant philosophy, but a *philosophy of mankind*."

We have been thus minute in setting forth the origin of the Royal Society, as being one of the most important institutions of the country, founded on the purest and the best principles for the attainment of its great object.

It may be permitted here to remark, that this society (so long eminent in Europe) has, in a great measure, become more aristocratic than formerly in the selection of its members; for, in Charles's time, on an intelligent citizen of London being proposed at the recommendation of the king, he told them, *if they found any more such tradesmen they should be sure to admit them all*

Wren about this time discovered a method for the calculation of solar eclipses, which was published by Flamstead in his doctrine of the sphere, and which was followed for many years as the most concise and plain. The Annals of the Royal Society also bear the amplest testimony to his knowledge and industry, in his commentaries on almost every subject connected with the abstruse sciences and the arts of life; and, in conjunction with Boyle, Hooke, and Wilkins, he originated many of the most important experiments of the day.

Amongst his communications was a History of the Seasons, as to temperature, weather, productions, diseases. For illustrating this subject he devised many curious machines, several of which kept their own registers, tracing out the lines of variation so that a person might know what changes the weather had undergone during his absence; and these contrivances he applied to wind-gages, thermometers, barometers, hygrometers.

He made great additions to the recent discoveries on pendulums; and referred to what has been since perfected, the making the pendulum a natural standard for measure.

He also originated many ways of making astronomical observations easy and accurate; and added much to the theory of dioptrics. He made constant observations on Saturn, and gave a true theory of that planet, before the printed discourse on the subject by Huygens appeared. He made maps of the Pleiades and other stars; and proposed methods to determine the great question as to the earth's motion or rest, by the small stars about the pole, to be seen in large telescopes. And he effected many improvements in the theory of navigation.*

Amongst his discoveries in the arts there appears great ground to suppose, that it was he and not Prince Rupert who first invented the art of engraving in Mezzotinto, though it was subsequently much advanced by the Prince; who did not, however, bear any ill-will towards his rival; for it appears from the *Parentalia*, that Wren was enrolled in the list of his especial friends, to whom that distinguished personage sent a yearly present of his choicest wine, from his vineyard on the Rhine.

He also, from the years 1660 to 1720, employed himself in a series of papers on the longitude. To enter into a detail of all the studies and discoveries of Wren would, in fact, be to give the whole history of natural philosophy in his age. Many of his inventions are lost; for it will be observed, that he himself printed nothing: many were secretly sent abroad, and appropriated by others not unwilling to appear in borrowed feathers. Wren himself observes, in one of his letters, "I must confess I have often had the pusillanimity rather to neglect that right I ought

* Hutton, *Mathemat. Dict.*, &c.

in justice to have vindicated, than, by challenging it too late, incur the jealousy of being a plagiarist."

Whilst at Oxford he was employed by the king to make drawings of the animalcula seen by a microscope, as we have before noticed; and a model of the lunar globe as seen by the best telescope of the times, was constructed by him, representing the spots and various degrees of whiteness on the moon's surface, with the hills, eminences, and cavities; the whole contrived so that by turning it round to the light it showed all the lunar phases, with the various appearances that arise from the shadows of the mountains and valleys. This was afterwards placed in the king's cabinet.

Nor were the Muses neglected by Wren; his pursuits in this kind are alluded to by his correspondent the Bishop of Rochester, who compliments him on some translations of Horace, observing: "You have admirably well hit his genius, your verse is harmonious, your philosophy very instructive for life, your liberty in translating enough to make it seem to be an English original, and yet not so much but that the mind of the author is still religiously observed." Not much faith is to be given to the encomiums of friends in literary confidences, but from this it may fairly be inferred, that Wren must have at least surpassed mediocrity.

In 1662 his *Prelectiones Astronomicæ* were published at the Oxford press. Dr. Isaac Barrow, who succeeded Rooke as professor of geometry at Gresham College, in his inaugural address, pronounces a very elegant encomium upon the merits of Wren, into which he enters largely; describing him as being one of the earliest promise, and the fullest performance, of any genius of his time.

In 1675, the Bishop of Rochester dedicated to Wren his observations on Mons. de Sorbier's *Voyage to England*; and Hooke, in the preface to his *Micrographia*, states, that although he was at first induced to undertake the work at the suggestion of Bishop Wilkins, yet he commenced it with reluctance, because he had to follow the footsteps of so eminent a person as Dr. Wren, who was the first that attempted anything of this nature, and whose original draughts make one of the ornaments of the great collection of rarities in the king's closet;

adding, "I must affirm of him, that since the time of Archimedes there scarce ever met in one man so great a perfection, such a mechanical head, and so philosophical a mind."—He is also noticed with great honour by Newton in his *Principia*, in conjunction with Wallis and Huygens, as among the first mathematicians of the age.

Perhaps the whole history of literary and scientific men does not afford an example of one held in more high and general estimation than this highly gifted individual. His contemporaries appear willing and eager to testify both their admiration of his genius, and their esteem for that unreservedness and candour which prevailed throughout his intercourse with his associates. The history of his career is stained by none of those bickerings, those paltry struggles for priority or fame, so frequent in the lives of others of his time, who were as conspicuous for the weakness of their feelings as for the greatness of their minds. None of their bad passions appear ever to have darkened Wren's thoughts, or disturbed the even tenour of his course, directed as it was to the advancement of his favourite art, and the attainment of all that was useful in science. Neither could he be said to be afflicted with the credulity or vain pretensions which marked many of those who lived in the same age.

In 1665 he went to Paris, for the purpose of studying all the principal buildings, and the various inventions in the different branches of mechanics. From thence he intended to pass on into Italy, for the purpose of studying Vitruvius amidst the great remains of antiquity. While at Paris the Louvre was in progress, 1000 hands being daily employed on the works: some in laying its mighty foundations; some in raising the different columns and entablatures, composed of vast stones, by great and useful engines; others in carving, inlaying marbles, plastering, painting, gilding, which altogether formed, in the opinion of Wren, a school of architecture the best at that day in Europe. It was here he saw those great masters of the art, Bernini and Mansard. His few observations on the buildings of France have a peculiar relish and interest. "Fontainebleau (he remarks in one of his letters) has a stately wildness, and vastness, suitable to the desert in which it stands; the antique mass of the

Castle of St. Germain's, and the hanging gardens are delightfully surprising, (I mean to any man of judgment,) for the pleasures below vanish away in the breath that is spent in ascending.—The Palace, or if you please to call it, the Cabinet of Versailles, called me twice to see it; the mixture of brick and stone, blue tile and gold, make it look like a rich livery. Not an inch within but is crowded with little curiosities of ornament. The women, as they make here the language and the fashions, and meddle with politics and philosophy, so they sway also in architecture; works of filigree, and little trinkets, are in great vogue, but building ought certainly to have the attribute of *eternal*, and therefore to be the only thing incapable of new fashions.*

After enumerating many other buildings, he adds, "all of which I have surveyed, and that I might not lose the impression of them I shall bring you almost all France on paper, which I have found by some or other ready designed, and on which I have spent both labour and some money. Bernini's design of the Louvre I would have given my skin for; but the old reserved Italian gave me but a few minutes' view. It was a fine little draught on five pieces of paper, for which he had received as many thousand pistoles. I had only time to copy it out by fancy and memory, and I shall be able, by discourse and a crayon, to give you a tolerable account of it." In one of his letters he notices having on the anvil, "Observations on the present state of architecture, arts, and manufactures in France," which, however, unfortunately were never completed.

Wren returned in the beginning of 1666, and it does not appear that he carried into execution his project of visiting Italy.

Soon after the restoration, Charles II. contemplated the repair of the Cathedral of St. Paul's, which had become

dilapidated during the commonwealth; its revenues having been confiscated, and the choir converted into horse barracks by Cromwell. In 1660 a commission was issued (in which Wren was named) to superintend the restoration. He was long employed in considering the best mode of effecting this. The cathedral had been partly repaired by Inigo Jones, by the addition of a beautiful Corinthian portico at the west end, not however in character with the style of the building. Wren proposed to rebuild the steeple with a cupola; a form of Church building, Evelyn observes, not then known in England, but which was of wonderful grace. This project was at once defeated by the desolating fire of 1666, which, destroying the greater part of the city, so injured the cathedral as to make its restoration impossible; and to this the scaffolding, which had been put up for the repairs, mainly contributed.

Evelyn alludes to the attempt to repair St. Paul's, in his dedication to Wren of his *Account of Architects and Architecture*. "I have named St. Paul's, and truly not without admiration as oft as I recall to mind, as I frequently do, the sad and deplorable condition it was in: when, after it had been made a stable for horses, and a den of thieves, you, with other gentlemen and myself were by the late King Charles named to survey the dilapidations, and made report to His Majesty in order to a speedy reparation; you will not, as I am sure, forget the struggle we had with some who were for patching it up any how, so the steeple might stand instead of new building; when, to put an end to the contest, five days after, that dreadful conflagration happened, out of whose ashes this phoenix is arisen, and was by providence designed for you."

That which produced so much individual misery, afforded (as Sir Richard Steele observes) the greatest occasion that ever builder had to render his name immortal, and his person venerable. A whole city at once laid waste was an opportunity for the display of inventive genius, which had never before been given to any architect; but the selfishness of individuals, their disputes, and intrigues, and conflicting interests, prevented Wren from carrying his great design for the restoration of the metropolis into effect. And though many of the narrow lanes and confined spaces of

* Never, perhaps, was so complete a failure as the mass of incongruities at Versailles, and never such a profuse squandering of treasure and even of life. Dulaure, in his "History of Paris," states the expenses (including the moving of hills, and the various other projects) at the incredible sum of forty-eight millions sterling; from twenty-two to thirty-six thousand labourers were constantly employed on the works. A camp was formed for the workmen near the spot, the limits of which were strictly guarded; and it was criminal even to notice the vast waste of life in the soldiers employed, 10,000 of whom are said to have fallen victims to excess of fatigue, and to an epidemic disease caused by the exhalations from the swampy ground.

the old city were removed, still none of his views were adopted. As soon as the fire was subdued, whilst the ashes were yet alive, he was on the ground, considering his plan for the restoration of the city. He proposed one main street from Aldgate to Temple Bar, in the middle of which was to have been a large square capable of containing the new church of St. Paul, with a proper distance for the view all round; the parish churches were to be rebuilt so as to be seen at the end of every vista of houses, and dispersed at sufficient distances from each other; four piazzas were designed at proper distances; and lastly, the houses were to be uniform, surrounded by arcades, like those in Covent Garden; while by the water-side a large quay was to run, along which were to be ranged the halls belonging to the several companies, with warehouses and other appropriate mercantile buildings. If such a plan (modified in some degree) had been effected, London, it must be confessed, would have far exceeded every capital in the world. It may, however, be doubted, whether the climate of this country is suited to covered arcades; and with respect to the complete regularity and uniformity of the streets, although in theory this is captivating, in execution its effect is dull and disappointing. The total want of interest and variety in those towns where it has been adopted, such as Carlsruhe, Darmstadt, and Manheim, to which we may add the New Town of Edinburgh, affords sufficient evidence in support of this position.

London experienced an unexampled series of calamities: First harassed by the civil war; next desolated by the plague; after this oppressed by the exactions of the unsuccessful war of Charles; and last ravaged by the dreadful fire, which laid the whole city in ashes. But with all this, the courage and the spirit of the people were not borne down; and with one heart and one mind, in the very reeking ruins, the restoration of the city, with increased grandeur, was undertaken. It is difficult to refrain from entering at length into the details of this dreadful calamity, particularly when there are such materials as the lively pen of Evelyn (an eye-witness) affords; but it is impossible not to note the magnanimity of the people, as described by the Bishop of Rochester, a writer

far too courtly to attribute any very exaggerated merit to the humbler classes of society. He describes them "as enduring this, the second calamity, with undaunted firmness of mind; their example," he says, "may incline us to believe that not only the best natural, but the best moral philosophy too, may be learned from the shops of mechanics. It was indeed admirable to behold with what constancy the meanest artificers saw all the labour of their lives, and the support of their families, devoured in an instant. They beheld the ashes of their houses, and gates, and temples, without the least expression of pusillanimity. If philosophers had done this, it had well become their profession of wisdom; if gentlemen, the nobleness of their breeding and blood would have required it; but that such greatness of heart should be found amongst the *poor artisans and the obscure multitude* is, no doubt, one of the most honourable events which ever happened." —The Bishop's habits and prejudices led him to be surprised at finding greatness and forbearance amongst the lower orders of a free and independent people. If he had not learnt better from history, the subsequent struggles of those very persons, under the still greater calamities induced by the oppression of the Stuarts, would have afforded him new ground for admiration.

Charles, during his residence abroad, had imbibed a taste for the arts, particularly for architecture, and amidst his sensualities and misgovernment was not unmindful of their advancement. Upon his deciding to repair St. Paul's, to reinstate Windsor Castle, and to build a new palace at Greenwich, Wren (who to his other attainments added a considerable knowledge of architecture) was sent for from Oxford in 1661, to assist Sir John Denham, the new surveyor general. In the same year he took the degree of doctor of laws.

Denham was a partisan of the court in the troublesome times of Charles I., and was rewarded by his master with a grant in reversion of the place of Surveyor General of the Board of Works, to take effect on the death of Inigo Jones. As a poet and as a loyalist his merits are admitted; but his reward might have been more judiciously selected, for he was entirely ignorant of architecture. "It would have been ungrateful in the

king, on his restoration," observes Mr. Elmes, with great simplicity, "to have discharged Denham, and unsafe to have intrusted him with the execution of any great work." Few men, it must be admitted, could so ill afford to add to the list of their acts of ingratitude towards their followers and dependants as Charles: Denham remained surveyor with the salary, Wren was appointed his deputy,—and performed all the duties of the office. Although appointed, he held the place for some time before he received any important public employment; and the Infanta of Portugal having brought the expensive dowry of Tangier, it was proposed to Wren, on account of his knowledge in geometry, to proceed there to survey and direct the works at the mole, harbour, and fortifications: this, however, he wisely declined.

During his progress in making plans for the repair of the Cathedral, the state and condition of which he appears very minutely to have ascertained, he was employed to give a design for the erection of the new theatre (Sheldonian) at Oxford, the principal merit of which is in the scientific construction of the flat roof, which is 80 by 70 feet without any arched work or pillars to support it, and is said never to have been surpassed. Plott, who in his history of Oxford has given a detailed description of it, calls Wren the English Vitruvius. Cambridge also was not slow to require his services, and his first commission was for a design for the new chapel of Pembroke Hall, of which his uncle had been a liberal benefactor. The celebrated library of Trinity College was also one of his early works.

CHAPTER IV.

On the form of the early Churches.

Before we enter on the subject of the erection of St. Paul's, confessedly the second of the cathedral edifices in Europe, it will not, we conceive, be out of place shortly to trace the origin of the present form of Christian Churches from the simple plans of the Temples of antiquity. Those of the Egyptians and Greeks were in the figure of a parallelogram again divided into squares or other parallelograms; and it probably was not till the Pantheon at Rome was erected, that the Grecian Tholos or circular temple was

attempted on so great a scale. The religious rites of the Greeks and Romans were all performed in the open air, either in the front of their temples, or in the midst of the city; the early Christians, on the contrary, persecuted on all sides, sought refuge in caverns and catacombs hid from the light of day, for the solemnization of the rites of their religion, until encouraged and protected by Constantine they first began to assemble openly in congregations, and to worship without fear.

The largest of the ancient enclosed buildings were the halls of Justice called *Basilicae*, or Royal Houses; it is supposed by some, that these were first appropriated by Constantine to the use of the Christian congregations, and being closed on all sides protected them from the fanaticism of their persecutors. The early Christian Churches were constructed on the model of these, and, up to the present period, have in some examples retained their name. The original form of an ancient temple was an oblong *cella*, or chamber surrounded with porticoes, or where the side porticoes were omitted there was always one in the front; but in the basilica the porticoes were internal, there being no exterior portico or colonnade; and the interior was divided by rows of columns either into three or five divisions. (*Fig. 1. and 2.*) In the centre

Fig. 1.

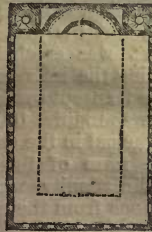
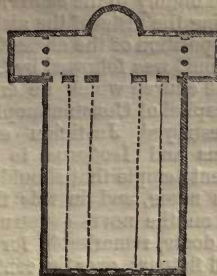


Fig. 2.



C

division (*fig. 1.*) the judge administered the law; and the side aisles, or porticoes, were occupied by the merchants and traders.

The first Christian Basilicas are referred to Constantine, and about the year 324 he erected the grand one of St. Peter's. It was divided into five aisles, running from east to west, and was terminated at the end by another aisle, or transept, from north to south, in the centre of which was a large semicircular niche, giving to the building an imperfect form of a cross, which he especially directed, as a memorial of that miraculous one which he had witnessed before his victory over Maxentius. The large aisle was enclosed by forty-eight columns of precious marble, and the side aisles had forty-eight columns of smaller dimensions: the whole was covered with a flat ceiling composed of immense beams cased with gilt metal, and Corinthian brass taken from the temples of Romulus and Jupiter Capitolinus. A hundred smaller columns ornamented the shrines and chapels; the walls were covered with paintings of religious subjects; and the tribunal, or niche at the end, was enriched with elaborate Mosaics or inlaid marbles. A vast number of lamps illuminated the temple; in the greater solemnities 2400 were reckoned, and 1360 of these were contained in an enormous candelabrum. It was on the site of this magnificent temple, which, falling into ruins, was pulled down by Julius II., that the present Basilica of St. Peter's was erected. In this sort of building the intersection of the aisles and the transept produced a centre which it was natural to enlarge and make the principal in the composition; this and the form of the Cross (the emblem of Christianity) were the cause of the deviations from the ancient form of the Basilica; and the invention of domes supported on pendentives added a size and dignity to the centre, without interrupting the vista of the aisles.

The disposition of the ancient St. Peter's at Rome was followed by Constantine in the church which he erected in his new capital of Constantinople. This being destroyed, Justinian employed Anthemius and Isidorus to erect a magnificent temple that should immortalize his name, and in this they first ventured on the novel construction of adding a dome, remarkable for its diameter and flatness, over the centre. The

plan of this Basilica is a square of about two hundred and fifty feet; the interior forms a Greek cross, *i. e.* one with equal arms: the aisles are terminated at two ends by semicircles, and at the other two by square recesses: the aisles are vaulted, and the centre (where the aisles and transept intersect) forms the large square on which is raised the dome, of about one hundred and ten feet in diameter. The dome is supported on the four arches and the pendentives, or spandrels, which connect the square plan of the arches, and gradually form a circle at the level of their summit.

In consequence of the true principles of this mode of building not being discovered, the architects fell into many difficulties, and it was only after experiencing several failures, among them the falling of half the dome, and adding strong buttresses, that they were enabled to accomplish the glory of this magnificent design. These difficulties were, however, obviated in the building of St. Peter's, as in the dome and cone of St. Paul's, by adopting a much larger segment of a circle, and by inserting strong chains in the stone work at the base of the dome immediately over the arches, so as to give the lateral pressure a perpendicular bearing.

On the revival of the arts, this Basilica, the most magnificent and the last of the Lower Empire, was that which most influenced the form and character of the new temples. The Venetians in the tenth century copied with success the best parts of the disposition of Santa Sophia in the church of St. Mark, (now destroyed;) and it was probably the first of any extent which in Italy was constructed with a dome supported on pendentives or spandrels, and which gave the idea imitated in St. Peter's, of accompanying the great dome of a church with smaller and lower domes, to give a pyramidal effect to the whole. The church of Santa Maria del Fiore at Florence, from the magnitude of its dome, and the skill which Brunelleschi displayed in its construction,* acquired a celebrity that made the system of domes prevalent, till it was finally established in the church of St. Peter's, the grand type of all others. It was in the beginning of the sixteenth century that Bramante formed the magnificent design of suspending over the centre of the Basilica a circular temple

* See Vasari's *Life of Brunelleschi*.

as large as the Pantheon;—raising, as he expressed it, the Pantheon on the Temple of Peace; and in the completion of this great work, Michael Angelo was occupied till his death.

CHAPTER V.

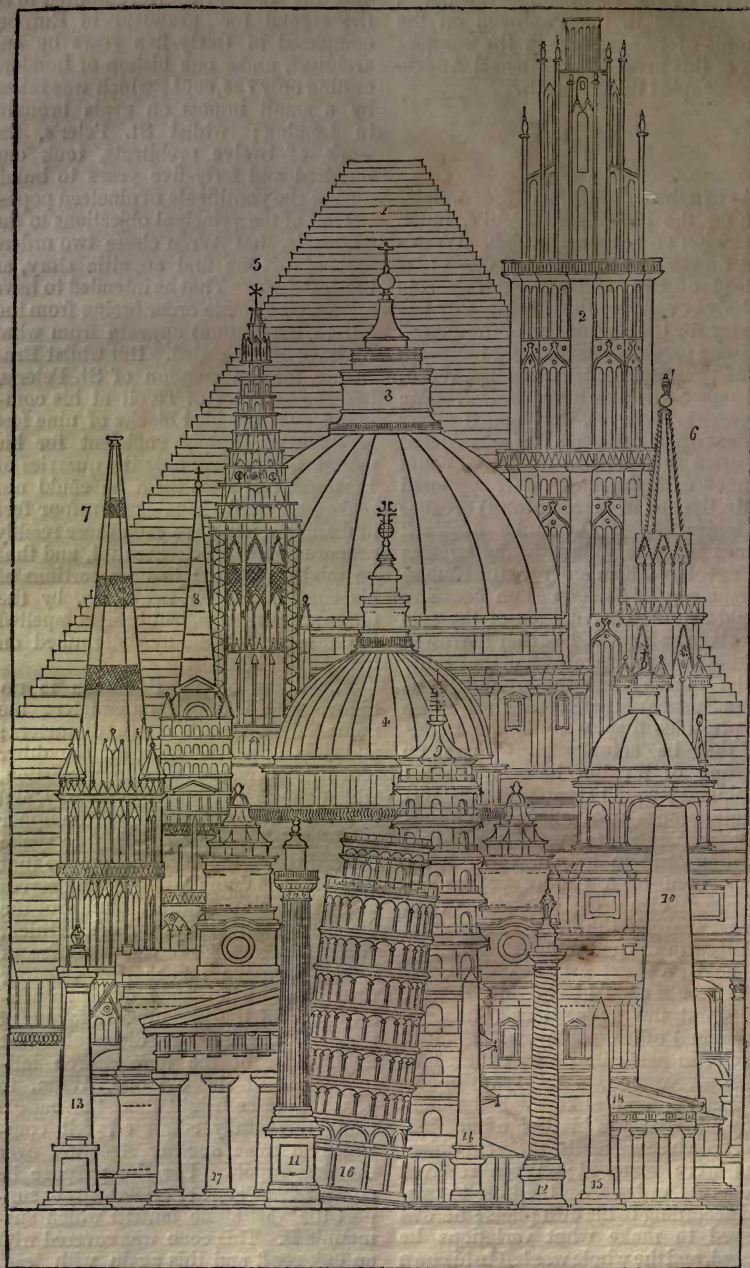
St. Paul's.

AFTER the nomination of the commission for the building St. Paul's, much discussion arose as to the plan. Wren's first design was to have but one order instead of two, and without any side oratories or aisles, these being only necessary for the ceremonies of the church of Rome: and this noble design appears in the beautiful model made by Wren, and kept in the present cathedral. The side aisles, however, were added either because their omission was considered too great a departure from the usual form of cathedrals, or (as is supposed by Mr. Spence in his anecdotes) because the suggestion of the Duke of York (James II.) was followed, and he was willing to have them ready for the Roman catholic service as soon as an occasion should arise. The addition of the side aisles is to be lamented, as they narrowed the building and broke in upon the beauty of the design; and the architect (observes Spence) insisted so strongly on the prejudice they were to the building, that he actually shed tears on speaking of it; but he remonstrated in vain. It would seem that this sort of interference is a misfortune peculiarly incidental to architects. Few would pretend to have a voice in the composition of a picture or the arrangement of a group of statuary; yet there is scarcely the work of any great architect, in the execution of which he has not in a great measure been compelled to abandon his original design, and adopt the suggestions (often incongruous) of his employers. Michael Angelo, in particular, was exposed to a like persecution, in his great work of St. Peter's, and alike had the harmony and beauty of his design impaired. After much cavilling the different objections were removed; Wren received an express order from the king to proceed according to his own plans; he was allowed to make what variations he pleased, and the whole was left to his own management. In thirty-five years from the commencement of the building, the highest and last stone was laid by Christopher, the son of the architect. Thus

was this splendid edifice, admitted to be the second for grandeur in Europe, completed in thirty-five years by one architect, under one bishop of London, costing only 736,000*l.*, which was raised by a small impost on coals brought to London; whilst St. Peter's, the work of twelve architects, took one hundred and forty-five years to build, during the pontificate of nineteen popes.

One of the principal objections to the edifice is, that Wren chose two orders instead of one and an attic story, as in St. Peter's. That he intended to have adopted the single order (going from the top to the bottom) appears from what we have before stated. But whilst Bramante, for the erection of St. Peter's, had the quarries of Tivoli at his command, which yielded blocks of nine feet in diameter, amply sufficient for his columns, Wren had only the quarries of Portland, and from them he could not reckon on blocks greater than four feet in diameter, nor were even these readily procured; on which account, and that he might keep the just proportions of his cornice, (which Bramante, by the failure of the stone, had been compelled to diminish,) he finally determined on the use of two orders.

The dome of the Pantheon is no higher within than its diameter; the dome of St. Peter's is two diameters; and this appears too high, the other too low: Wren took a mean proportion, which shows its concave every way, and is lighted by the windows of the upper order, which permit the light to strike down through the great colonnade that encircles the dome without, and serves at the same time for the abutment of the dome itself, which is of two bricks thick, every five feet high having a course of bricks eighteen inches long bonding through the whole thickness. In consequence of the prejudice in favour of steeples, and that no disappointment might arise of the new church falling short of the old one, Wren, to give a greater height than the cupola would gracefully admit of, felt compelled to raise another structure over the first cupola. For this purpose he constructed a cone of brick, so as to support the vast stone lantern which surmounts it. This cone was covered with an oak roof, and this again with lead, in the same manner as the other parts of the church. Between this outside covering and the brick cone there are stairs to ascend to the lantern, lighted



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|------------------------------|-------------------------------|------------------------------------|
| 1. Great Pyramid. | 7. Salisbury Spire. | 13. Nelson's Column. |
| 2. Spire of Mechlin. | 8. Notre Dame, Paris. | 14. Obelisk, front of St. Peter's. |
| 3. St. Peter's. | 9. Pagoda by Sir W. Chambers. | 15. Cleopatra's Needle. |
| 4. St. Paul's. | 10. Wellington's Testimonial. | 16. Leaning Tower at Pisa. |
| 5. Strasburgh Cathedral. | 11. Monument, London. | 17. Temple of the Giants, Agrigen- |
| 6. Hôtel de Ville, Brussels. | 12. Trajan's Column. | 18. Parthenon. |

[tum,

from the lantern above, which did away with the necessity of making the small ugly windows in the dome, as at St. Peter's. The inside of the whole cupola is painted by Sir James Thornhill, in eight compartments. In the crown of the vault, as in the Pantheon, there is a circular opening, by which not only the lantern transmits light, but the inside ornaments of the painted and gilded cone display a new and agreeable scene. Instead, however, of painting the dome, Wren had proposed it should, like that of St. Peter's, be enriched with the more durable and appropriate ornament of Mosaic, and had procured artists from Italy for its execution; but the ignorance and the prejudice of the persons employed as commissioners, in this, as in other cases, thwarted his views. The ornaments at the East end he designed should only be temporary, till the materials for the completion of a magnificent altar which he had planned could be procured.

In scale* and beauty of internal ornament, as well as material, situation, and climate, the work of Wren cannot come in competition with its great rival; but in architectural excellence it has fair claims to be placed on an equality; surpassing it in some things, if in others it falls short. The portico in front of St. Peter's, both for its beauty of proportion and vast size, is admitted to be a feature of high excellence and without any match in St. Paul's; yet the whole flat front of St. Peter's, terminating in a straight line at the top, cannot be said to afford such a pleasing variety as is bestowed by the elevation of the pediment in the middle, and the beautiful campanile towers at each end of the front of St. Paul's. One of the happiest parts of the invention is in the intersection of the three vistas of the nave, the aisles, and the cross and transept, attained by the octangular arrangement of the piers, which is as beautiful as it is novel, giving four additional views to the usual arrangement, and with an effect remarkable for its boldness and lightness. Fi-

gures 4 and 5, exhibit the ground plans of the two buildings drawn on

Fig. 4.

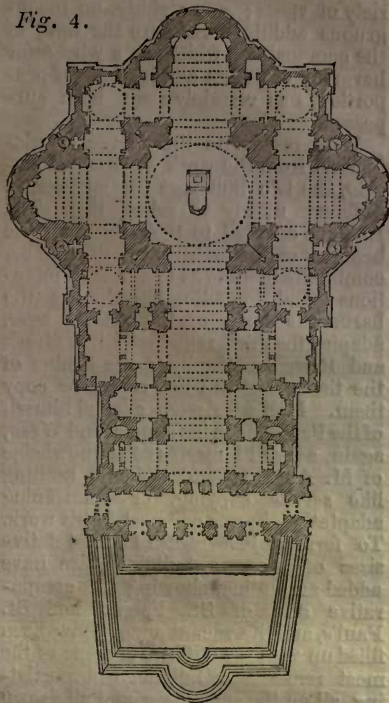
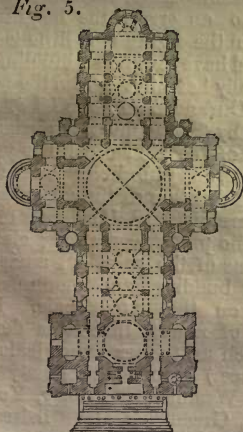


Fig. 5.



* Relative Sizes.

	St. Peter's.	St. Paul's.
Long within	669	500
Broad at the entrance	226	100
Front, without	395	180
Broad at the cross	442	223
Cupola, diameter	139	103
Cupola and lantern, high	432	330
Church, high	146	110
Height of pillars in front	91	49

the same scale; the peculiarity noticed in the ground plan of St. Paul's is pointed out by the dotted lines. In St. Peter's the whole building is surrounded by a repetition of vast pilasters. In St. Paul's, however, take the building in any point of view, it

is highly picturesque, the different returns and façades affording endless variety of views; no patching, no incongruous additions disfigure the unity of the composition, which, as a whole, for harmony of design and justness of proportion, has certainly never been surpassed.

With respect to the charge of plagiarism from the work of Michael Angelo, the two buildings are sufficiently different utterly to rebut this. The Romans adapted to their purposes the beauties of the architecture of Greece, combining them so as to suit their intentions; and Palladio, abandoning the barbarous taste of the middle ages, adapted the great remains both of Greek and Roman antiquity to the genius of the times, but did not repeat or copy them. Michael Angelo availed himself of the Pantheon in his cupola, and Wren, again, availed himself of the knowledge of M. Angelo; but there is nothing like servile copying, or unmeaning adaptation, in any one part of his work. To form a just idea of the relative sizes of the two buildings, we have added an outline, showing the comparative size of St. Peter's and St. Paul's, and the vacant spaces have been filled up with the outlines of some of the most remarkable buildings now existing, all on the same base and all drawn on the same scale, but unfortunately, owing to an error, the height of St. Paul's in the figure is a little less than it should have been. The buildings have principally been taken from the work of Mons. Durand, *The Parallel of Architecture*, by far the most important production of the kind which has yet been published, and affording great facility for the consideration of the general principles of architecture. It consists of ninety large folio plates, containing elevations and plans of the principal ancient and modern buildings and monuments, all drawn on the same scale. It is a matter of regret, that it is defective, inasmuch as, (either from jealousy or ignorance,) among the ninety plates, neither Westminster Abbey, York Cathedral, Greenwich and Chelsea Hospitals, our bridges, nor even our docks, (the largest in the world,) are inserted; and amongst the plans of English theatres, the only one given is that in the Haymarket.

In addition to the total want of the rich ornaments and the costly materials which adorn the interior of the church

of St. Peter, it also far surpasses the building of Wren in the nature of the materials with which it is constructed. It has been a matter of regret that the quality of the stone used in the public buildings of this country has been hitherto but little attended to. Many of the public edifices of London, Edinburgh, Bath, and Oxford, furnish melancholy instances of the want of judgment in this choice of materials. It is obvious that the stone which is most porous, will, when exposed to the weather, be least durable: water lodges in its pores and penetrates the crevices, and by the mere change of temperature does mischief; but during frost the expansion is so great, that in a single winter the sharp parts often entirely crumble away. The fitness of the different species of sandstone for the purpose of building, may in a great measure be judged of by immersing the specimens in water, each being previously weighed, and all of one size; the excellence of the stone will be inversely to the quantity of water absorbed. The magnesian limestone, so abundant in England, is considered the best adapted for architectural purposes; it is far preferable to that termed the Oolite of Somersetshire and the Isle of Portland, of which the most important buildings have hitherto been constructed. Rain water always contains carbonic acid, which acts chemically on limestone, but less on those kinds which are fine grained and magnesian, than those which are coarse and free from magnesia; and although this often produces an external hardening, as in the Bath stone, it is only the forerunner of a more quick peeling off and destruction. It is obvious, that for durability, the granites, sienites, whinstones, and porphyries, are most to be preferred. The Strand Bridge is a magnificent example of the use of granite; the exterior being coarsely constructed of two sorts, the coarse-grained granite of Devon and Cornwall, and the fine-grained and harder sort from Aberdeen, used for the balustrades, and stronger than that from Cornwall, as 22 to 14. The only means of proving the respective durability of them is from the effect of time; and the Cornish granite evidently appears to have suffered more decay than the harder stone of the North. Granite, however, independently of the great increase of expense incurred in the working it, is unfitted for all the finer parts of ornamental work;

in that case it would be well to adopt the marble or dolomite of Scotland, or the magnesian limestones, so much to be preferred to the perishable sand and lime stones of the west of England.* But the subject has not yet received its due share of attention from those whose pursuits and knowledge best enable them to form an accurate judgment upon it.

Although Wren's new employments occupied much of his time, his zeal for the advancement of science never forsook him; but, as he employed himself in the practical parts of building, his communications to the Royal Society became more technical, and applied principally to his own art. A very interesting letter to Lord Brounker, the first president of the Royal Society, is given by Mr. Elmes: it is in answer to a request to provide something for the suitable entertainment of his majesty, who had purposed visiting the Society. Upon this Wren observes, "The experiments for the establishment of natural philosophy are seldom pompous; it is upon billiard and tennis balls, upon the purling of sticks and tops, upon a vial of water, a wedge of glass, that the great Des Cartes has built the most refined and accurate theories that human wit ever reached to; and certainly nature, in the best of her works, is apparent enough in obvious things, were they but curiously observed; and the key that opens treasures is often plain and rusty, but unless it be gilt, the key alone will make no show at court." It does not appear how the philosophers succeeded in entertaining their royal guest. Wren in 1673 resigned the Savillian professorship, which he had held so long with credit. He was twice in Parliament, though it does not appear that he took any active part in the debates. In 1680 he was elected President of the Royal Society, and before that period he had been knighted by Charles II.

The delight one can well conceive a person of Wren's genius to have enjoyed, in the contemplation of the rise of the vast edifice which his creative genius had called into existence, was not undisturbed or unalloyed. Many improper persons were joined with him in the commission; and they, having private interests to serve, and selfish

feelings to indulge, were thwarted by the inflexibility of Wren, who exposed at once their meanness and their ignorance. This, it may be supposed, was neither forgotten nor forgiven; and they joined in a cabal, persecuting him with every species of bitter malevolence. It will scarcely be supposed that one of Wren's genius and talent, of his gentle bearing towards all, his high patriotic feeling, at once the judge and the patron of every thing that was useful either in the arts or sciences, should have been subjected to the petty cavilling of a few interested persons without greatly retarding the progress of the building. But this was not all; the party having procured a clause to be inserted in an act of parliament, suspending a moiety of his pittance (200*l.* a year) till the building was finished, Wren was kept out of his money long after it was due, under the pretence that the building was not complete, whereas the cavillers themselves, by their impediments, alone hindered its completion. He was in consequence obliged to petition Queen Anne; and in his memorial he states, that the arbitrary proceedings of some of the commissioners had alone obstructed his measures for the completion of the work. This was handed over to the commissioners themselves for their answer, who replied by mean and paltry excuses. Wren, however, was not to be borne down by a low cabal: he next addressed the Archbishop of Canterbury and the Bishop of London, and the document itself affords ample testimony of the treatment he had received.

"The design of the parliament (he states) in granting the coal duty for the said cathedral, being to have the building completed with all possible speed, they did, to encourage and oblige the surveyor's diligence in carrying on the work, suspend half his allowance till all should be done. Whereby, I humbly conceive, it may justly from thence be implied, that they thought the building, and every thing belonging to it, was wholly under my management and direction, and that it was in my power to hasten or protract it. How far it has been so your lordships know; as also how far I have been limited and restrained. However, it has pleased God so to bless my sincere endeavours, as that I have brought the building to a conclusion, so far as is in my power; and I think nothing can be said now to remain imperfected, but the iron fence

* Brande's Journal, vol. iii. 331.

round the church, and painting the cupola, the directing of which is taken out of my hands, and therefore I hope that I am neither answerable for them, nor that the said suspending clause can, or ought to, affect me any further on that account. As for painting the cupola, your lordships know it has been long under consideration; that I have no power left me concerning it; and that it is not resolved in what manner to do it, or whether at all. And as for the iron fence, it is so remarkable and fresh in memory by whose influence and importunity it was wrested from me, and the doing it carried in a way that I may venture to say will ever be condemned. I have just this to observe further, that your lordships had no hand in it; and consequently ought not to share in the blame that may attend it.

"This, then, being the case, and nothing left that I think can keep the same clause of suspension any longer in force against me,

"I most humbly pray your lordships to grant your warrant for paying me what is due to me on that article, which was 1,300*l.* last Michaelmas. And if for the future my advice and assistance be required in any thing about the said cathedral, I will be ready to give the same, and to leave the consideration of it to your lordships."

This representation not succeeding, he applied at once to parliament, who rendered him that tardy justice, the long denial of which reflects so much disgrace on those who opposed his just claims.

"Whereupon that honourable and august assembly," says Sir Christopher,* "so considered his case, and were so well satisfied with the justice and the reasonableness of it, as to declare the church to be finished so far as was required to be done and performed by him as surveyor-general. And it was accordingly enacted, that the suspended salary should be paid him on or before December the 25th, 1711, which he has the truest sense of, and has not, he hopes, been wanting in all due acknowledgments and returns for it. Neither is it possible that he, or his posterity should ever forget so signal and distinguishing a favour, while he can remember the unjust and vile treatment he had from some in the late commis-

sion for St. Paul's; which was such as gave him reason enough to think that they intended him none of the suspended salary, if it had been left in their power to defeat him of it."

By the death of Anne, Wren lost the last of his royal patrons; in the new reign, the king's partiality for his German subjects and their connections deprived him of the sunshine of royal favour. His talents, his uprightness, and his fame were all forgotten: the corruption of that period in the disposal of patronage is well known. At last, after a severe struggle in the 86th year of his age and the 49th of his office as surveyor-general, he was deprived of his patent in favour of one Benson, his German influence prevailing over one who would not condescend to truckle even to a court, and whose life, as Walpole observes, having enriched the reign of several princes, disgraced the last of them. The intrigue which deprived him of his office is noticed in the memoirs of John Ker of Kersland; who states that, "so great was the influence of Benson, (a favourite of the Germans,) that Sir C. Wren, the famous architect who contrived the stately edifice of St. Paul's church, was turned out of his employment to make way for this favourite of foreigners." Pope also in a note to the *Dunciad* says, "In favour of this man, the famous Sir C. Wren, who had been architect to the crown for above fifty years, who built most of the churches in London, laid the first stone of St. Paul's, and lived to finish it, was displaced from his employment at the age of 90 years."

It may, indeed, be observed, that Wren's son was at this time member for Windsor, and probably some opposition to the wishes of the court might have had an influence on the father's fall. Benson himself, however, was soon disgraced and removed on the discovery of his ignorance and incapacity, and marked for public prosecution for his dishonesty; but the same influence, which had caused his original elevation, at once stopped the prosecution and loaded him with disgraceful rewards out of the public purse,* in the shape

* Benson and Wren each had his due notice in the *Dunciad*.

Benson, sole judge of architecture, sit,
And namby pamby be preferred to wit;
While Wren with sorrow to the grave descends,
Gay dies unpension'd with a hundred friends,

* In a pamphlet which he published stating his case, and for the purpose of answering an attack made on him in a pamphlet entitled "Fraudulent Abuses at St. Paul's."

of reversionary grants and crown leases.

The following curious paper of Wren's is given by Mr. Elmes: it is in answer to the commissioners, who insisted on a balustrade to St. Paul's, none having been originally designed; and it is one of the long series of attacks which were made on him by his enemies.

"I have considered the resolution of the honourable the commissioners for adorning St. Paul's Cathedral, dated October 15, 1717, and brought to me on the 21st, importing that a balustrade of stone be set up on the top of the church, unless Sir Christopher Wren, in writing under his hand, set forth, that it is contrary to the principles of architecture, and give his opinion in a fortnight's time; and if he doth not, then the resolution of a balustrade is to be proceeded with.

"In observation of this resolution, I take leave, first, to declare I never designed a balustrade. Persons of little skill in architecture did expect, I believe, to see something they had been used to in Gothic structures; and *ladies think nothing well without an edging*. I should gladly have complied with the vulgar taste, but I suspended for reasons following:

"A balustrade is supposed a sort of plinth over the upper colonnade, which may be divided into balusters over open parts or voids, but kept solid over solid parts, such as pilasters; for a continued range of balusters cannot be proposed to stand alone against high winds: they would be liable to be lopped down in a row, if there were not solid parts at due distances intermixed, which solid parts are in the form of pedestals, and may be in length as long as the frieze below where pilasters are double, as in our case; for double pilasters may have one united pedestal, as they have one entablature and one frieze extended over both. But, now, in the inward angles, where the pilasters cannot be doubled, as before they were, the two voids or more open parts would be in the angle with one small pilaster between them, and create a very disagreeable mixture. I am further to observe, that there is already over the entablature a proper plinth, which regularly terminates the building; and as no provision was originally made in my plan for a balustrade, the setting up one in such a confused manner over the plinth must apparently break into the harmony of

the whole machine, and, in this particular case, be contrary to the principles of architecture.

"The like objections as to some other ornaments, suppose of vases, for they will be double upon the solids; but in the inward angles there will be scarce room for one, though each of them be about two feet nine inches at bottom, and nine feet high: yet these will appear contemptible below, and bigger we cannot make them unless we fall into the crime of false bearing, which artisans of the lowest rank will have sense enough to condemn.

"My opinion, therefore, is to have statues erected on the four pediments only, which will be a most proper, noble, and sufficient ornament to the whole fabric, and was never omitted in the best ancient Greek and Roman architecture; the principles of which, throughout all my schemes of this colossal structure, I have religiously endeavoured to follow; and if I glory, it is in the singular mercy of God, who has enabled me to begin and finish my great work so conformable to the ancient model.

"The pedestals for the statues I have already laid in the building, which now stand naked for want of their acroteria.

"CHRISTOPHER WREN."

These details respecting the erection of a building which (if we except St. Peter's) is unrivalled in the world, will not, it is hoped, appear either trifling or tedious, but give an additional interest to the contemplation of that splendid monument of Wren's genius.

The character and fate of Michael Angelo and Wren were in many respects akin: remarkable alike for the universality of genius, each the builder of the greatest work of architecture of his time, each untainted by any vice, and regardless of private interests, (for Michael Angelo received no remuneration on account of St. Peter's,) they were both persecuted by the envious, and each had his works altered by the ignorant. Michael Angelo's severe honesty, in compelling those who received pay to give their labour in return, conjured up a whole host of enemies; and sickened with these obstacles he sought to free himself by the resignation of his charge. "I entreat your eminence," he writes to Cardinal Carpi, "to liberate me from this vexatious employment, which, by the command of the popes, I undertook seventeen years ago, during which pe-

riod I have given manifest proofs of my zeal in the prosecution of the work. I again earnestly entreat I may resign, which would be conferring on me the greatest favour."

Amongst the many willing to do justice to the merit and the modesty of Wren, when labouring under the persecution of court intrigue, was Sir Richard Steele, who, in his *Tatler*, No. 52, under the character of Nestor of Athens, observes that "his art and skill were soon disregarded for want of that manner with which men of the world support and assert the merits of their own performances; this bashful quality still put a damp on his great knowledge, which has as fatal an effect upon men's reputation as poverty, for it is said, (Ecclesiasticus, ch. ix. v. 15,) *The poor man by his wisdom delivered the city, yet no man remembered the same poor man.* So here we find *the modest man built the city, and the modest man's skill was unknown*; but surely posterity are obliged to allow him that praise after his death which he so industriously declined while he was living."

CHAPTER V.

To the End of his Life.

WREN quitted the field without a struggle; he retired in peace from the world to his home at Hampton Court, without being affected by any of that bitterness or those angry feelings which the ingratitude and injustice of a court so often engender in minds of less noble stamp, saying, *Nunc me jubet fortuna expeditius philosophari.* Cheerful in his solitude, and as well pleased to die in the shade as in the light—his son observes of him in the *Parentalia*, "that the vigour of his mind continued with a vivacity rarely found in persons of his age, till within a short period of his death, and not till then could he quit the great aim of his whole life to be (to use his own words) a benefactor to mankind; his great humanity appearing to the last in benevolence and complacency, free from all moroseness in behaviour or aspect; he was happily endued with such an evenness of temper, steady tranquillity, and Christian fortitude, that no injurious incidents or inquietudes of human life could ever ruffle or discompose."

The five remaining years of his life were passed in complete repose. Returning occasionally to superintend the repairs of Westminster Abbey, his only remaining public employment, he di-

vided his time between the study of the Scriptures, which were at once his guide and his delight, and in the revision of his philosophical works, more particularly those upon the Longitude, and his tracts on Mathematics and Astronomy. Time, which had enfeebled his limbs, left his faculties unclouded till nearly the end of his existence. His chief delight to the very close of life was, that of being carried once a year to see his great work; "the beginning and completion of which," observes Walpole, "was an event which one cannot wonder left such an impression of content on the mind of the good old man, that it seemed to recall a memory almost deadened to every other use."

Wren's dissolution was as placid as the tenour of his existence had been. On the 25th of February, 1723, his servant conceiving he slept longer after his dinner than usual, entered his room, and found him dead in his chair.—He, to whom in his latter days all distinction had been denied, received, as frequently happens, the tardy honour of a splendid funeral; his remains were deposited in the crypt under the southernmost window of the choir of the Cathedral which he had raised; a plain black slab alone covers the coffin, but no monument beyond the Pile itself attests his goodness or his greatness. On the western jamb of the window of the crypt, is a tablet with this inscription:

Subtus conditur
Huius ecclesiæ et urbis conditor
Ch. Wren,
Qui vixit annos ultra nonaginta
Non sibi sed bono publico.
Lector, si monumentum quæris
Circumspice.*

Robert Milne, one of his successors in the care of the cathedral, caused this inscription to be placed in gilt letters in a tablet in front of the skreen of the organ: and it is a reproach to the nation and to the age, that no other monument has ever been erected. Indeed, until Mr. Elmes's volume, (with the exception of the *Parentalia*,)† no biographical notice

* "Beneath is laid the builder of this church and city, Christopher Wren, who lived above ninety years, not for himself but for the public good. Reader, if thou seekest for his monument, look around."

† *Parentalia, or Memoirs of the Family of the Wrens*, folio, London, 1750. This work was commenced by the son of Sir C. Wren, and was not completed till thirty years after his death, when it was published by his grandson, Stephen Wren. The work itself is of little interest; most of the facts it records have been adopted by Mr. Elmes, in his *Life of Wren*, 4to., 1823, and from these two works the biographical part of the present treatise has been chiefly compiled.

of him had been published. We trust, however, that before long Mr. Cockerel, the present architect to St. Paul's, who has lately superintended its repairs with so much judgment, will carry into effect an intention he is known long to have entertained, of giving to the world a critical account of Wren's most important architectural works, accompanied by a selection from the large collection of drawings now in the library of All Souls' College. Till this shall be done, it can hardly be said that his professional merits can be duly appreciated. Mr. Cockerel's attainments and talents afford a pledge that the work will be all that either the architect or the amateur can require.

Wren was twice married; first to the daughter of Sir Thomas Coghill, by whom he had one son, Christopher. He afterwards married a daughter of William Lord Fitzwilliam, Baron of Lifford, in Ireland, by whom he had a son and a daughter. The family is not extinct: Mr. Elmes mentions two daughters, and the son of his grandson Stephen, and Christopher Wren, the son of their cousin, of Wroxhall-abbey, in Warwickshire, a seat of Sir C. Wren's, where his only son, Christopher, is buried.

In considering the life of Wren we are struck with the splendour of his abilities, the greatness of his perseverance and labour, the scantiness of his remuneration, and the ingratitude and injustice which he experienced towards the close of his long and arduous course. When the prices paid in these days to artists are called to mind, what must be the surprise at learning that the whole salary paid to the architect of St Paul's was only 200*l.* a year. Wren afforded all his services in the building of Greenwich Hospital, without any salary or emolument, preferring in this, as in every other passage of his life, the public service to private advantage. And it will be observed, that his salary of 200*l.* a year was not paid for his mere designs and time; it included the whole expense of models and drawings of every part, the daily overseeing of the works, the framing of the estimates and contracts, and auditing the bills. Without making any invidious comparison, it cannot be denied, that of late there have been few such examples shown of disinterested services towards the public by artists employed in situations similar to his. The scantiness of his pay

was more than once noticed by the writers of the time; and Sarah Duchess of Marlborough, in a letter* respecting the charges of one of the persons employed to superintend the completion of Blenheim, who had made a charge of 300*l.* a year for his services, beside a salary for his clerk, complains bitterly at being compelled to pay this, "when," she observes, "it is well known that Sir C. Wren was content to be dragged up in a basket three or four times a week to the top of St. Paul's, and at great hazard, for 200*l.* a year."—Her Grace was perhaps but little capable of drawing any nice distinction between the feelings of the hired surveyor of Blenheim, and those of our architect in the contemplation of the rising of the fabric which his vast genius was calling into existence: her notions led her to estimate the matter by the simple process of the rule of three direct; and on this principle she certainly had good reason to complain of her surveyor.

CHAPTER VI.

His other Works.

IN addition to the great work of St. Paul's, Wren, who was appointed the architect for the rebuilding of the whole city, superintended the erection of all the churches, amounting to more than fifty; he was also the architect and contriver of Chelsea College, and the principal officer and comptroller of the works at Windsor. A considerable part of Greenwich Hospital was erected by him, and a splendid palace for a hunting seat of Charles II., now turned into a barrack, was commenced at Winchester. In addition to all these duties, a large proportion of his time was occupied, after the fire of London, in setting out and ascertaining the sites of the different houses destroyed—an employment little suited to his genius, and which involved him in endless altercation. His pay as the architect for rebuilding the churches in the city, was not more liberal than for St. Paul's, being no more than 100*l.* a year; the parish of St. Stephen, Walbrook, however, appears, on his completing that admirable church, to have voted a present to his lady of twenty guineas!

In a sketch intended merely for general readers, it is not necessary to enumerate in detail the different churches erected by him: those which

* In the possession of W. Tooke, Esq.

are most celebrated for the beauty and convenience of the interior, are St. Stephen's, Walbrook, St. Andrew's, Holborn, and St. James's Church in Piccadilly. St. Stephen's is, by many, considered as the most perfect specimen of Wren's genius; and it has not, perhaps, been surpassed by any modern edifice in elegance and unity of design. It is an oblong square of seventy-five by fifty-six feet; its peculiar beauty arises from the elegance of the vaulting, the form of the cupola, the disposition of the Corinthian columns, the lightness of the supporting arches, and the distribution of the light from above. A judicious and elegant writer on the *Public Buildings of London* observes, "that this building, so little known amongst us, is famous all over Europe, and is reputed the masterpiece of Wren. Perhaps Italy itself can produce no modern building that can vie with it in taste or proportion. There is not a beauty which the plan would admit of, that is not to be found here in its greatest perfection: and foreigners very justly call our taste in question for understanding its graces no better, and allowing it no higher degree of fame." Such is the reputation of this structure amongst foreigners, that an anecdote is told of an Italian architect who arrived in London and immediately returned after having visited St. Stephen's.

The church of St. James, in Piccadilly, is divided, in the interior, into a nave and two aisles; the principal merit is in the formation of the roof, which is described from information furnished by Mr. Cockerel, as singularly ingenious and economical; and its simplicity, strength, and beauty, are represented as a perfect study of construction and architectural economy. Sir Christopher Wren, who himself conceived this to be one of the best contrived of his churches, observes in a letter—

"Churches must be large: but still, in our reformed religion, it should seem vain to make a parish church larger than that all who are present can both *hear* and *see*. The Romanists, indeed, may build larger churches: it is enough if they hear the murmurs of the mass, and see the elevation of the host; but ours are to be fitted for auditories. I can hardly think it practicable to make a single room so capacious, with pews and galleries, as to hold above two thousand persons, and all to hear the service, and see the preacher. I en-

deavoured to effect this, in building the parish church of St. James, Westminster, which, I presume, is the most capacious with these qualifications that hath yet been built; and yet at a solemn time, when the church was much crowded, I could not discern from a gallery, that two thousand were present. In this church I mention, though very broad, and the nave arched up, yet as there are no walls of a second order, nor lanterns, nor buttresses, but the whole of the roof rests upon the pillars, as do also the galleries, I think it may be found beautiful and convenient, and, as such, the cheapest of any form I could invent."

The interior of St. Andrew's, Holborn, after St. James's Church, affords one of the best specimens of arrangement; spacious, rich, and beautiful. It has a nave and two aisles divided into a basement and galleries: the length is a hundred and five feet, the breadth sixty-three, and the height forty-three.

No architect can come in competition with Wren in the construction of the steeple, which is considered a requisite in Christian churches, and in the composing of which it required his genius to combine the excellence of the Roman architecture, with the requisites of height and lightness, to which it had not before been adapted with any success. The spire of St. Dunstan's in the East is admitted to be unrivalled for elegance, and is one of the finest monuments of geometrical skill in existence. That of Bow Church is also among the most elegant of Wren's works; the bottom is a plain tower till it rises over the houses; above this is a beautiful temple, and over it stand flying buttresses supporting a lighter temple, surmounted by a spire. Nothing can afford fuller evidence of his power to combine and adapt the elegant features of the Roman architecture, so as to suit the genius of the work. Wren has not fallen into the common error in building spires, of making the spire straddle across a Greek pediment and crush it with the weight; thus, the spire of Bow Church is built separately, and rises from the ground at an angle of the church.

Another curious work of Wren was the pendulum stage in the upper part of the spire of the Chichester Cathedral, which he rebuilt, to counteract the south-westerly gales, which had forced it from its perpendicularity. (*Fig. 6*) A

to illustrate this has been added to the work of Mr.

Fig. 6.



To the finial is added a strong metal rod to that is suspended a large piece of iron; at the bottom are two oak floors, the upper about two inches and a half, and the lower three inches less than the interior masonry spire. When the wind blows the spire out perpendicular, the upper floor touches the side of the spire, tending to restore the equilibrium of the ma-

Doric column at the top of London Bridge, (the largest column in existence, the Wellington testimonial, also designed by Wren; its height is 202 feet, being 42 higher than Trajan's column; the pedestal is 20 feet high, 20 feet square; the diameter of the base is 15 feet, and there are 345 steps in the shaft of the column.) Works of Sir C. Wren do not seem to have been all uniformly successful. Hampton Court and Windsor Palace are far from being false specimens of the art. The effect made by him from the buildings in the Fourteenth had too visible effect on his own designs of public and private buildings; and may be considered fortunate," says Horace Walpole, "that the king built only palaces and no churches, and therefore Saint Paul's is not, but Hampton Court was sacrificed to the god of false taste." The failure at Hampton Court may, in great measure, be attributed to his having worked under the directions of Charles II., whose favourite residence it was, and whose taste in architecture was not low his merit as a patriot king; when the arrangement of the windows was criticized, the monarch, with his wonted honesty, took the whole blame on himself, acknowledging that they had been constructed according to his own particular orders. Nor is it reasonable to infer that in his other works, the defects arose in some degree from the taste of his employers, but that he was compelled by them to

adopt the French fashions, which at that time retained the powerful influence in this country, which the profligate and frivolous court of Charles II. had bestowed upon them.

We have omitted to notice the College of Physicians,* built by Wren, which, in a particular department, was one of the most scientific of Wren's edifices. The exterior, indeed, was nowise to be admired; but in the interior, for the purposes of utility and convenience, it was considered perfect, as affording every facility both for seeing and hearing, in the display of anatomical operations and philosophical experiments. As a study of *acoustic* and *optical* architecture it was perhaps unrivalled, the peculiar character of the roof and form of the section being admirably adapted to the distribution of sound, and the form of the hall equally suited to the convenience of seeing.

In the construction of theatres and of churches, the propagation of sound is one of the most important points to be attended to. The doctrine of *acoustics* is little understood by builders in this country, and yet, however hidden to us the subject may be, it is certain the ancients understood its principles with great accuracy; whilst in modern times this important object of architecture has been almost wholly neglected. Vitruvius describes the effects of the science as well understood by the Greeks. The method of producing the effect of the increase of sound in their theatres was singular; and from the mention of it in Vitruvius, as being of frequent use both in these and in the Roman theatres, it is to be inferred that the effect sought was produced. The arrangement, as described, consisted in placing bronze vases or jars in small chambers or recesses having an opening in front in the *precinctio*, between the first and second row of seats. These jars were inverted, having one end partially raised: they were of different sizes, and are said to have been arranged according to some principle of harmony. It has been a matter of considerable surprise that, with the number of travellers who have been of late so actively exploring the antiquities of Greece and Italy, no remains of this contrivance have been discovered. Mr. Banks, however, it is said, discovered at Scythopolis the remains of these chambers situated in the *precinctio*,

* This building is now dismantled.

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with doors at the back, apparently for the convenience of access to adjust the vases. This is an important subject of consideration in the construction of theatres, and more particularly in church architecture. In the present churches it not unfrequently happens that the architect ensures the congregation full opportunity of contemplating his edifice, by so building it that no articulate sound can reach half the persons present. There is another important point in the construction of churches, which has been hitherto mainly overlooked, namely, the advantage arising from what is termed *hypæthral* light, or light from the roof. When this is adopted, the interior architecture has its own light and shade in the same way as the outside; and that solemn effect, so well adapted to sacred buildings, is attained by the appearance of seclusion and abstraction which the light coming from above instead of the sides is calculated to bestow.

Wren did not publish any works in his lifetime, except his contributions to the Royal Society, and his answer to the attacks made against him. In the *Parentalia*, a few fragments of essays are printed, some of which contain very judicious observations on the science of architecture. The limits of this sketch do not, however, permit any very long extracts; the following are, perhaps, the most interesting:

"Position is necessary for perfecting beauty. There are only two beautiful *positions of straight lines*, perpendicular and horizontal; this is from nature, and consequently necessary, no other than upright being firm. Oblique positions are discord to the eye, unless answered in pairs, as in the sides of an equilateral triangle; therefore *Gothic* buttresses are all ill-favoured and were avoided by the ancients, and no roofs, almost, but spheric raised to be visible, except in the front, where the lines answer in spheric in all positions the ribs answer. Cones and multangular prisms want neither beauty nor firmness, but are not ancient.

"Views contrary to beauty are deformity, or a defect of uniformity; and plainness, which is the excess of uniformity; variety makes the mean.

"Variety of uniformities makes complete beauty. Uniformities are best tempered, as rhymes in poetry, alternately, or sometimes with more variety, as in stanzas.

"In things to be seen at once much variety makes confusion, another vice of beauty. In things that are not seen at once, and have no respect one to another, great variety is commendable, provided this variety transgress not the rules of *optics* and *geometry*.

"An architect ought to be jealous of *novelties*, in which fancy blinds the judgment; and to think his judges as well those that are to live five centuries after him, as those of his own time. That which is commendable now for novelty, will not be a new invention to posterity, when his works are often imitated, and when it is unknown which was the original; but the glory of that which is good of itself, is eternal.

"The architect ought above all things to be well versed in *perspective*, for every thing that appears

well in the orthogr. may not be good in the model, especially where are many angles and projections; and every thing that is good in model may not be so when built; because a model is seen from other stations and distances than the eye sees the building; but this will hold universally true, that whatsoever is good in perspective, and will hold so in all the principal views, whether direct or oblique, will be as good in great, if this only caution be observed, that regard be had to the distance of the eye in the principal stations.

"Things seen near at hand may have small and many members, be well furnished with ornaments, and may lie flatter; on the contrary, all this care is ridiculous at great distances; there bulky members and full projections casting quick shadows are commendable; small ornaments at too great distance serve only to confound the symmetry and to take away the lustre of the object, by darkening it with many little shadows.

"There are different reasons for objects, whose chief view is in *front*, and for those whose chief view is *sideways*.

"Fronts ought to be elevated in the *middle* not the *corners*; because the middle is the place of greatest dignity and first arrests the eye; and rather projecting forward in the middle than hollow. For these reasons pavilions at the corners are naught, because they make both faults, a hollow and depressed front. Where *hollows* and *solidis* are mixed, the hollow is to be in the middle; for hollows are either niches, windows, or doors. The first require the middle to give the statue dignity; the second, that the view from within may be direct; the third, that the vista may be straight. The ancients elevated the middle with a tympan and statue, or a dome. The triumphant arches, which now seem flat, were elevated by the magnificent figure of the victor in his chariot with four horses abreast, and other statues accompanying it. No sort of pinnacle is worthy enough to appear in the air but statue. Pyramids are *Gothic*; pots are modern *French*. Chimnies ought to be hid if not well adorned. No roof can have dignity enough to appear above a cornice but the circular: in private buildings it is excusable. The ancients affected flatness. In buildings where the view is sideways, as in streets, it is absolutely required that the composition should be square; intercolumniations equal; projections not great; the cornices unbroken, and every thing straight, equal, and uniform. Breaks in the cornice, projectures of the upright members, variety, inequality in the parts, various heights of the roof, serve only to confound the perspective and make it deformed; while the breaches and projections are cast upon one another and obscure all symmetry. In this sort of building there seems no proportion of length to the height; for a portico the longer the more beautiful, in innium; on the contrary, fronts require a proportion of the breadth to the height; higher than three times the breadth is indecent, and as ill to be above three times as broad as high. From this rule I except obelisks, pyramids, columns, such as Trajan's, &c., which seem rather single things than compositions; I except also long porticoes, though seen direct, where the eye, wandering over the same members, infinitely repeated, and not easily finding the bounds, makes no comparison of them with the height."

"Modern authors, who have treated of architecture, seem generally to have little more in view, but to set down the proportions of columns, architraves, and cornices, in the several orders as they are distinguished into Doric, Ionic, Corinthian, and Composite; and in these proportions, finding them in the ancient fabrics of the Greeks and Romans, (though more arbitrarily used than they care to acknowledge,) they have reduced them into rules, too strict and pedantic, and so as not to be transgressed without the crime of barbarity; though, in their own nature, they are but the *modes* and *fashions* of those ages wherein they were used; but because they were found in the great structures, (the ruins of which we now admire,) we think ourselves strictly obliged still to follow the fashion, though we can never attain to the grandeur of those works."

CHAPTER VII.

The School of Wren.—His Successors.

It may be proper to close this treatise with a few observations on the successors of Wren,—on the present taste for architecture,—and on the French school.

Hawkesmore, Vanbrugh, Gibbs, and others, of the same date, followed in his footsteps, proceeding upon the foundations laid by the revived or Palladian school. Hawkesmore was amongst the most successful pupils; he was so considered by his master, and he certainly surpassed his contemporary, Vanbrugh. It is observable, that after the age of Wren, something beyond the pitch of the art was attempted by his immediate successors, and amongst the foremost in this attempt was Hawkesmore. Something beyond the orders, something almost colossal appears to have been effected; but although there was a partial success, it seems as if something greater was intended than was, or indeed could be, attained. The works of Hawkesmore evince great beauties of conception, but mixed with so many caprices and so many defects, that he has perhaps never yet received his due share of credit.

The steeple, as applied to a building on the plan of a Grecian or Roman temple, is always absurd, and even Wren himself could not always rescue it from deserved and contemptuous criticism: but Hawkesmore appears to have been the only one who has ventured to place this steeple on one side of the building, as in St. George's, Bloomsbury; by this means avoiding at least the incongruity of making a steeple rise out of a temple. St. George's, Limehouse, and St. Mary's Woolnoth's, may be considered as the best specimen of his style; and the beautiful portico of St. Martin's in the Fields, now again about to see the light, is the masterpiece of Gibbs.

Amongst the succeeding class in the Palladian school, the most conspicuous were Ware, Sir William Chambers, and the Adams. Sir William Chambers's works are remarkable for their taste and elegance, and for a purer imitation of the antique of Italy. The Adams, with many defects chiefly from falling into the details of the Venetian school, produced works worthy of admiration, and were the first who investigated the Roman baths and the remains of the Roman villas, thus opening a new

source of architectural combination, of which they often took great and judicious advantage. The Library at Luton is one of the most striking examples of this happy adaptation.

Without being entirely devoted to what is termed the Palladian school, or wishing to be supposed insensible to the beauty of the pure Grecian architecture, it must be admitted that the present taste for the pure Greek is carried too far. While we acknowledge the excellence of the great original, there is danger that some of the present professors may lose sight of the valuable additions which architecture has acquired from the labours of the Romans, and after them from the Revival school. These improvements are more adapted to utility than the Grecian architecture, which was besides deficient in some of the most important principles of magnificence, as for instance those obtained by the introduction of the arch, which opened a new field for grandeur, variety, and extent, and enabled the architect to cover a space beyond the power or combination of the Greeks to reach. It is almost impossible, by taking the very few existing examples of Grecian architecture (consisting only of sacred edifices) as models, to erect buildings calculated to serve the infinitely varied purposes of modern wants, without the risk of distortion and misapplication. The excellence of Greek architecture consisted in its principles of elegance and proportion, and what may be termed the detail, rather than its utility for the great purposes of construction. The shape of the Grecian temple admits of no change without the destruction of its beauty: add a side wing as a vestry, or let a tall spire shoot up above the low tympanum, and every principle of proportion and fitness is destroyed. Besides, the thing we produce has little resemblance to the original: the Grecian temple was designed to form a feature in the surrounding landscape, to be a vehicle for the exposition of sculpture, of the most exquisite and elaborate kind; it was radiant with gold, azure, and vermilion, laid on the pure marble; the delicate mouldings were to be seen under an unclouded sun, and to remain in a climate which conserved an unchanged appearance for ages. How different is the copy, cooped up in the smokes of a great city, composed of coarse materials, and without any aid of ornament, except a few mock stone vases or figures wretchedly executed!

The exclusive admiration of the Grecian architecture is becoming the cant of the day. It is impossible to agree with the dogmas of the professors in their exclusion of all the resources which the ingenuity of the moderns has furnished, and which the necessities of greater civilisation require: yet this different and less intolerant opinion may be entertained without any deficiency in admiration of the beautiful specimens of antiquity. This country is greatly indebted to the publications of Stuart and Revett, and of the Dilettanti Society, who first cultivated the true taste for Grecian antiquities, and laid accurate representations of them before the public. Stuart, whose original employment was that of painting fan mounts, but whose talents and industry enabled him to surmount all difficulties, conceived the happy idea of going to the original source of the beautiful in the arts; and from reading the Grecian history, figured to himself that there must remain at Athens a purer style than had been adopted either by the Romans or by the Revival school. He performed the journey on foot, with very slender resources, and joining company with Mr. Revett, produced the work which has redounded so much to the credit of himself and of his country. His project immediately excited the jealousy and with it the rivalry of the French, who despatched Le Roy in order to anticipate their labours, which he did by publishing his work at Paris long before the work of Stuart and Revett appeared. Le Roy however employed only twenty-one days in executing that which his rivals were engaged on for three years. The result might be easily foreseen. Le Roy's book soon sold for waste paper, and the *Athenian Antiquities* have since their publication in England been reprinted at Paris.

In mentioning the different great artists of the English school, we should do injustice in omitting the names of several distinguished amateur architects. Amongst the foremost of these stand Lord Pembroke, Lord Burlington, Lord Leicester, Dr. Aldriche, and Dr. Clarke, whose labours have tended so much to the advancement of the science, and whose works redound so much to their credit.

In comparing the French and English modern schools of architecture, Monsieur Le Grand, in his Essay, has very candidly admitted our superiority: "The English," he says, "adopted Pal-

ladio, whilst we have followed the orders of Vignola; but with this difference;—they adopted the plans of Palladio entire, and accompanied by all their elegance and simplicity, whilst we have applied the orders of Vignola to the most complex shapes in our buildings, and which we have overloaded with whimsical ornaments of the very worst taste; and the result of a comparison between the ancient architecture and ours is, that our own is complex, whilst that of the ancients was simple; their exhibits grand ideas in the most trifling edifices, whilst ours, in the execution of the greatest objects, are but a collection of small parts, and those united with difficulty, which is mis-called ingenuity."

The fact is, the French were ambitious of forming a new school: they were to invent new orders which were to be exclusively French; and their buildings in the age of Louis XIV. exhibit examples, in which all kinds of incongruous ornament are collected together without principle or meaning. To this succeeded what they conceived to be the pure Grecian taste; but as it was before the Grecian monuments had been studied or understood, this second manner was in truth very little more elegant or perfect than the former. They are scarcely ever successful in their attempts to adopt the styles of antiquity: although there is no nation so prone to affect a species of classical show, and none more ambitious of giving to the productions in art a classical air. This is observable particularly in their school of design, and in their drama; and yet it is impossible to contend that they have been successful. The difference of taste and manner between the French and the English, may, perhaps, be accounted for in some degree by their different modes of study. The French both in their studies and in their pursuits adopt more of the academic system than is followed in England; they work in bodies, and under the direction of the government, whilst our most laboured productions are the works of individuals, and consequently more likely to afford specimens of originality, if not of perfection. Without entirely denying the benefit of academies for the advancement of the arts, it is only from frequent experience of their failure through mismanagement, that the argument arises against increasing their number, or extending their influence.

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